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THE NAVY AND THE NATION

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THE NAVY AND THE NATION

THE NAVY AND THE NATION;

OR

NAVAL WARFARE AND IMPERIAL DEFENCE

BY

LIEUT.-COL. SIR GEORGE S. CLARKE, K.C.M.G., F.R.S.

AND

JAMES R. THURSFIELD, M.A.

Μέγα γὰρ τὸ τῆς θαλάσσης κράτος

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THE NAVY AND THE NATION.

INTRODUCTION.

"ENGLAND," wrote Sir Walter Raleigh, "is a country that can never be conquered while the sovereigns thereof have the command of the sea." Behind Raleigh lay centuries in which the sterling truth of the principle here enunciated had been amply vindicated. From Saxon times the territorial security of England and the power exerted externally had depended solely upon naval strength. Invasions, successful or averted, commerce crippled or prosperous, had taught one lesson; but the term "command of the sea" had as yet a restricted application. In the Mediterranean, the Channel, and the North Sea, rival navies had contended for mastery; but the laws governing naval warfare, the conditions determining naval strength, and the far-reaching scope which that strength confers, had received full illustration. The "influence of sea power upon history" had already been abundantly manifested.

The age of Elizabeth was a real turning-point in the career of the British nation. The dream of Continental possessions had faded away, and for nearly one hundred and fifty years after the loss of Calais, British troops ceased to figure on European battlefields, although expeditionary forces were frequently employed against isolated points

on hostile shores. With the exception of a futile effort of James I., military entanglements in European affairs played no further part in the national history till renewed by William III. Meanwhile, the germ of the Royal Navy, originated in the reign of Henry VII., was destined to bear rich fruit. The rout of the Armada, presaged by Drake's descent upon Cadiz, carried with it far more than the mere failure of a projected invasion. The great naval Power of the age, the Power which was established in the Americas, and monopolized the ocean commerce of the world, was vanquished on its own element. Henceforth, the New World lay open to British seamen. Where Spanish ships could sail, they, too, could direct their course. Spanish treasure, whether afloat or on shore, became available booty. The way was open for the expansion of England, and the term "command of the sea" began to acquire a wider significance.

Nothing is more remarkable than the prescience and the instinctive grasp of naval conditions manifested by the great seamen of Elizabeth. To them was given the clear vision of a future in which the Navy of England, dominating the seas, would lay the foundations of Empire. That the rule of the sea was the natural heritage of the British people, that this rule implied security at home and power abroad, that commerce under the ægis of the flag would thrive, and that the naval policy of a commercial Power must be essentially offensive; these were the articles of a living faith. Ships were clumsy, and the art of sailing had scarcely emerged from infancy. Moderate stress of weather sufficed to paralyze naval action. But the seamen of the sixteenth century knew no doubts or fears, and it was left to generations living in days when the sea had been almost robbed of its terrors to discover the precarious nature of naval defence, and to dilate upon the risks arising from wind and storm. Confronted with a threatened invasion on a vast scale, having regard to the then military resources of England, Howard and his captains were unanimous in urging that the Armada should be met and fought off the

coasts of Spain. Ten years before the arrival of the Armada in the Channel, Sir Gilbert Humphrey, pleading with the Queen for the exploration of the North-west Passage, asserted that "no prince's Navy of the world is able to encounter the Queen's Majesty's Navy, as it is at this present; and yet it should be greatly increased by the traffick ensuing upon this discovery, for it is the long voyages which increase and maintain great shipping."

The "England" of Raleigh had a population of less than six millions, and a trade insignificant if measured by modern standards. Until after the Union of 1707, Scotland brought no strength to the national cause, while Ireland was a standing source of weakness. The young settlement of Virginia was not founded till 1606, and Jamaica was not wrested from Spain till 1655. Relatively to France, Spain, and Austria, almost to Holland, England was a small State, with few resources. Her one hope of future greatness lay in the manifestation of sea power—in the gifts of what has been styled, with strange oblivion of the plain teaching of history, "the unstable element." The British Empire of to-day embraces eleven millions of square miles, with a population approaching three hundred and fifty millions, and a sea-borne commerce whose annual value is at least £1,750,000,000 sterling.* This stupendous development of three hundred years has been rendered possible solely by naval agencies. So abundantly has the sturdy faith of the Elizabethan seamen been justified by works.

Reliance upon the unstable element has found strenuous advocates from the days of Offa to our own, but it cannot be said to have supplied the basis of a consistent national policy. Many causes have combined to induce temporary oblivion of the sea, and a full intellectual and practical acquiescence in the precepts of Raleigh and of Nelson has never been attained. The modern empire of Germany has been created by military force alone. On military force its security absolutely depends, and the fact is firmly grasped alike by rulers and people. The efficiency of the army is

* See below, "Navies and Commerce," pp. 92–104.

a condition to which all other measures of defence are subservient and for which no patriotic sacrifice is grudged. The Royal Navy is to the British Empire all and far more than her army is to Germany. The military defeat of a great European nation is not and cannot be fatal, or Germany, Austria, and France would not now exist. All are practically self-contained; none is dependent for very life on sea-borne trade, and for Empire on territory linked together by the sea alone. Naval supremacy, till the sixteenth century, implied the command of home waters and the territorial security of a small island. To the minds of the seamen of Elizabeth it signified the promise of a mighty future. To the British Empire of to-day, it is the only possible guarantee of national existence. Deliberately offensive in its objects three hundred years ago, and unconsciously offensive in the later struggles with Holland, Spain, and France, it is now strictly defensive. The period of expansion at the cost of other Powers ended nearly a century ago, and Great Britain has now no need of and no desire for further aggrandizement of this nature. The sacred duty remains to us of guarding the national honour and handing down our splendid inheritance intact to our descendants.

The naval history of the world is spread over more than two thousand years, during which the technical conditions of naval warfare have undergone continuous change. Yet the long record is consistent throughout. Naval supremacy in the contest between Greeks and Persians, Romans and Carthaginians, Great Britain and Spain, Holland, and France, Federals and Confederates, Balmacedists and Congressionalists, China and Japan, conferred the same powers and entailed the same consequences. The element of time alone modifies the aspect of modern maritime operations. In proportion to the speed of fleets, and to their independence of weather, is necessarily the promptness of the results attained by them. Naval battles will be decided now by precisely the same qualities as those which gave victory at the beginning of the century, and almost

certainly by the same weapon. There is no essential difference between the defeat of the Armada and the battle of the Yalu. Tactics will now, as formerly, be directed to obtain an advantage in the use of the gun. The means adopted will vary; but the object remains the same. The command of the sea may, however, be more quickly asserted now than formerly, and will take effect over a wider area. The range of the menace of a superior fleet is increased by reason both of the rapid transmission of intelligence and of the enhanced speed with which that intelligence can be followed up by action. It has been argued that the factor of speed confers equal advantage upon the inferior navy; but this is not the case. The time required for landing troops, or for operations against an enemy's sea-board, has not been reduced in even approximate proportion to the gain in rapidity of movement at sea. It follows that the menace of an undefeated fleet, even if slightly inferior, or not more than equal, to the force seeking to undertake an act of territorial aggression, is greater now than it was in the days when it proved consistently effective. Again, assuming equal strategic ability in the directing heads, it is the superior navy which must gain most from the new power of accomplishing swift and certain combinations, and the results of naval victory or defeat will be felt more quickly and more widely than formerly. Lastly, steam commerce is far less easily assailable than was the shipping which relied for motive power upon sails alone. The latter had a limited choice of courses, and its movements could consequently be predicted with tolerable certainty. A sailing ship could not clear a port at nightfall, and be a hundred miles away at daybreak. A group of such vessels menaced by a cruiser could not at once separate on widely divergent courses. A chased sailing ship, if over-matched in speed, had small chance of escape. A steamer once lost sight of at night or in thick weather is practically safe. These and other considerations indicate clearly that in the wars of the future naval supremacy will possess greater intrinsic value than in the past, that commerce is more

easily protected, and that the command of the sea has now a significance which neither Raleigh nor Nelson could have divined. All modern progress has tended to enhance the power of the naval weapon, and to remove many of the uncertainties by which naval action may have seemed to be beset. The superior fleet was liable to be dispersed and even shattered by a storm which its antagonist might escape. Ships engaged in the observation or the blockade of an enemy's port might be blown far out to sea by the very wind that favoured the egress of that enemy. This cannot now occur, and the reduction of the risks of the sea favours the superior naval power. Coal supply is the new requirement of fleets, and the measure of their potentiality. Given an adverse command of the sea, the difficulties of obtaining coal in distant waters will, to the inferior navy, prove immense, and the superior force thus receives an added advantage. It is true that the home coaling stations of the great Powers are practically unassailable, and that their foreign stations, if adequately garrisoned, would entail considerable expeditions for their capture. In distant waters, however, Great Britain has almost a monopoly of coal, which is secure so long as naval supremacy is maintained; while for the free action of fleets the employment of colliers is essential, and this, in the case of the inferior force, will be attended with risks so great as to cripple, if not to prohibit, the prosecution of large strategic designs. From every point of view, therefore, enhanced advantages favour "those that be strongest by sea."

Throughout our long history there have been periods in which the gifts of the sea have been flouted, entailing in some cases a swift Nemesis. Political conditions, oblivion of the teaching of war, or the perverse counsels of individuals in authority, have induced neglect of the national Navy, and encouraged reliance upon subordinate and—for Great Britain—wholly ineffectual measures of defence. War has thus found the country unprepared, and heavy losses, easily avoided, have been entailed. So

soon as stern necessity has arisen, the rehabilitation of the fleet has forced itself upon the nation as the one indispensable means of guaranteeing territorial security at home and abroad, and of giving effect to the national will. The lesson has been driven home by dire need, and it is not in times of war that reflections as to the uncertainties of naval operations, and the precarious nature of naval defence, have found countenance or even expression. At the beginning of the present century, the nation had learned in the school of experience to trust the Navy. With a long peace came reaction, aided by a strange misreading of the lesson of the Crimean and American Wars. Ships had failed before the defences of Sebastopol and Cronstadt—failed, that is to say, in tasks which did not pertain to a navy. Armies at length achieved a limited result. Fortifications defended by a steadfast garrison, under the direction of a soldier of genius, developed a resisting power which was all the more impressive because in forty years of peace the history of sieges had been forgotten. In the imagination, therefore, of a generation which had not known naval war, armies and fortifications came to be regarded as the main defence of the greatest of maritime States. The Navy, in popular phrase, remained the "first line," since, if afloat, and not dispersed by storms or decoyed away into space, it would probably have the earliest contact with an enemy who could attack only over sea. But an army and fortifications were held, after all, to be the real safeguards upon which must ultimately fall the burden of Imperial defence. It was natural, therefore, even logical, that an era of fortification should supervene, and that a policy of passive defence should be tacitly accepted. As naturally, the strength of the Navy was allowed to decline till the annual vote for shipbuilding was equalled or exceeded by that of France, who within a few years of the disasters of 1870–71 began to steadily increase her fleet. It is indisputable that the vast expenditure upon measures of passive defence which was inaugurated in 1859 checked and stunted the growth of the Navy. Too much, however,

... of this point, and the actual expenditure is ... account in comparison with the warping of the ... and the establishment of false standards, ... great war can efface. After many millions ... needlessly squandered, the scares of 1878 and of ... were widely felt. It was realized that the nation was ... unprepared, and that measures of passive defence, ... theoretically satisfactory, were quite unsuited to ... of war. The contrast between the feeling of ... which prevailed in 1878 and 1885, and the calm ... displayed at the beginning of the present year, ... object lesson of peculiar significance.

... part of a consistent scheme of national policy, ... initiative of a great statesman, was it at length ... to strengthen the fleet. The Naval Defence ... was due to the efforts of writers and speakers, ... appeals to history and to reason aroused the ... nation to a sense of peril. For the moment ... is redirected upon the Navy, and whatever ... demands will be cheerfully provided. We ... best worthy of the Empire, and the moral effect ... of our waning naval strength has been ... The phrase "command of the sea" ... That naval supremacy, to be quickly ... outbreak of war, is essential to our exist- ... will now be nowhere contested. How ... movement of the last eight years has ... determined. Whether we are in ... reaction from the fatuous theories to ... had given rise; whether the abrupt ... may not be succeeded by a new ... the lines which, since 1815, have ... attention away from the Navy are ... abeyance; whether the dreams ... European battlefields still ... cannot be answered. In the ... affairs and the growing intelli- ... there appears to be substantial

ground for hope. Yet there are not wanting signs that if peace should happily endure, another swing of the pendulum is possible. That the sea communications of the Empire must be held in war; that if they are so held, territorial security against serious attack both at home and abroad is, *ipso facto*, provided; that if they are not so held, no army of any assigned magnitude, and no fortifications of any imagined technical perfection, can avert national ruin; these are the cardinal principles of Imperial Defence. "Under the conditions in which it would be possible for a great Power to successfully invade England, nothing could avail her, as the command of the sea being lost, it would not require the landing of a single man upon her shores to bring her to an ignominious capitulation, for by her Navy she must stand or fall." So, in 1888, wrote three distinguished admirals,* including a past and the present First Naval Lord of the Admiralty. This clear statement applies with equal force to every portion of the Empire. It is, of course, conceivable that India or Canada might be lost, though the command of the sea were retained; but, on the other hand, if the command of the sea were lost, neither could be defended. By concentrating attention upon what is inaccurately called "home defence," upon the local military problems of India, upon the supposed technical requirements of an individual fortress or the needs of a single colony, first principles are easily obscured. The defence of an Empire such as ours cannot, however, be dealt with in piecemeal fashion, and to the test of great principles each question must be referred. These principles rule all minor issues, though this fact is at present imperfectly grasped.

Above and beyond the details of local defence lies the domain of national policy. Here also the necessity of maintaining naval supremacy—vital to us alone among the Powers of the world—ought to dominate every other consideration. Did the inevitable advance of Russia from the Caspian to the frontier of India imperil our naval

* Sir W. Dowell, Sir R. Vesey Hamilton, and Sir F. Richards.

supremacy? If not, of what use were the flood of declamation and the protracted diplomatic warfare, each alike undignified and futile, of which the sole result was the estrangement of two nations which have no real cause of disagreement. Is the military occupation of Egypt essential to the command of the sea? Would a Russian occupation of Constantinople, some twenty-six hours' steam from Sebastopol, compromise our naval position? Does the tenancy of Cyprus hold out the prospect of any naval advantage in the event of war? At the root of all these and other matters lies the question of the Navy. If once the determination to hold the command of the sea is permitted to supply the basis of the national policy, clear daylight would shine through the mist of doubts and difficulties.

In the earnest hope of riveting attention upon the question of the Navy, of indicating its wide scope and many ramifications, of warding off reaction, and of helping to provide an assured basis for a great scheme of Imperial policy, these essays have been republished. The writers have long held in common, and often discussed together, the leading views here propounded; but each is exclusively responsible for the original form and substance of the essays to which his initials are attached. The close concurrence of view to which they have been separately led may perhaps serve to enhance the intrinsic weight of their reasoning. The lack of co-operation and of a common design in the original preparation of the essays emphasizes the essential unity of purpose which pervades them. In conjointly revising their work for republication, the writers have, therefore, deliberately refrained from expunging coincidences of argument and expression which derive a mutual support from the circumstance that they were entirely undesigned.

The several subjects here dealt with in disjointed fashion are intimately co-related. One ruling idea permeates all alike. The command of the sea must now be held by Great Britain, and to this condition all others have become

subordinate. It has been fulfilled in the past, less perhaps by deliberate design than by necessity demonstrated in great wars. We dare not wait for a fresh demonstration, since the national stake in the sea is now far greater than in the days of Nelson. Even if it were possible ultimately to restore the situation, the early losses arising from an initial failure of sea power would now suffice to shake the foundations of the Empire. With deliberate and avowed purpose, therefore, must the required preparations be made. The impulse imparted in 1889 must be sustained, and the more widely the question of the Navy is brought home to the masses at home and in the Colonies, the brighter will be the hopes of the future. Closer than at any period of our history, intimate as Raleigh could not have foreseen, are now the relations between the Navy and the Nation.

G. S. C.
J. R. T.

IMPERIAL DEFENCE.*

MORE than two thousand three hundred years ago a patriot statesman inaugurated a great scheme of national defence, and laid the foundations of an Empire. Seventy-three years later that Empire was shattered, and to the scheme history, in part, ascribes the catastrophe.

Even before the Persian invasion, the sea power of Athens had conferred upon her a position of marked distinction among the states of ancient Greece, and when the victory of Marathon and the immortal defence of Thermopylæ proved alike unavailing to arrest the advancing hosts of Xerxes, it was Themistocles, at the head of two hundred Athenian ships, who nevertheless vehemently counselled naval resistance. The oracle of Delphi had announced that "when all was lost, a wooden wall should still shelter the Athenians," and Themistocles affected to find in this ambiguous phrase the presage of naval victory.

Athens was almost deserted when the Persians entered. Her citizens had fled to Trœzen and Ægina, or lingered houseless on the shores of "rock-bound Salamis." The fate of Greece was entrusted to the fleet hemmed in the narrow straits, and no sea-fight was ever more decisive than that which followed. Having signally failed to hold the command of the sea, Xerxes, alarmed for his communications, at once retreated to and across the Hellespont, leaving Mardonius to be defeated in the following year at Platæa. The Persian invasion had disastrously failed, and Herodotus

* Read at the *Royal Colonial Institute*, February 11, 1896, and republished by permission of the Council.

fifty years later could fairly claim that Athens had been "the saviour of Grecian liberty."

The realization of a great danger barely escaped led to a pacific revolution, of which the fleet, like that of James II., was the principal instrument, and out of the chaos created by the Persian invasion, Aristides set himself to organize a league of national defence. The "Confederacy of Delos" was formed to unite the Ionians in preparations to resist the common enemy. Its basis was purely naval; for in the year 478 B.C., the meaning of the term "command of the sea" was perhaps better understood than in our day, and if the application was practically limited to the Eastern half of the Mediterranean, the principle was at least so clearly recognized as to supply the leading motive of a great national policy. The confederates agreed to an annual contribution of money or ships to be assessed by Aristides, and all were to send delegates to take part in periodical discussions of the affairs of the League. Dominated by Athens, the confederacy was employed to further her ambitions. After the death of Aristides and the banishment of Themistocles, Pericles rose to supreme power, and Athens was launched upon her brief career of Empire. "The reward of her superior training," said Thucydides, "was the rule of the sea—a mighty dominion—for it gave her the rule of much fair land beyond its waves, safe from the idle ravages with which the Lacedæmonians might harass Attica, but could never subdue Athens." "Pericles," writes Sir Edward Creasy, "made her trust to her empire of the sea."

The objects of the Confederacy of Delos were, however, easily forgotten; the tribute increased even when no danger pressed, and the accumulated funds were misapplied to the fortifying of the Imperial city. Dissatisfaction and jealousy grew apace. The outbreak in 435 B.C. of hostilities between Corinth and her colony Corcyra brought on the Peloponnesian war; while the disastrous failure of the expedition against Syracuse, in 413 B.C., inflicted a deadly blow on Athenian supremacy. The Spartans made common cause

with Cyrus, and the capture of the fleet of Conon in the Hellespont at length placed Athens at the mercy of Lysander.

I have dwelt for a moment on this chapter of history, because the Athenian Empire, like our own, depended entirely upon naval supremacy and a great Colonial system, and because, in the confederacy of Delos, I trace an attempt to solve, by means of statesmanship, a problem analogous to that with which we are now confronted.

Of all the Colonial systems which the world has known, that of ancient Greece stands nearest to our own; but the analogy is not by any means complete. The Greek colonies owed their origin to the pressure of population, to strong commercial instincts, and occasionally to civil dissensions. They were politically independent, and the bond of union with the Mother Country was easily broken, so that war with each other or with the parent state was not unusual. They were impelled to maintain navies as a safeguard to the commerce upon which their whole prosperity depended. While contributing to the prestige of the Mother Country, they were not regarded as sources of profit; nor, prior to the confederacy of Delos, were they organized with a view to national defence. And so slight was the bond that temporary self-interest might impel them to take common action with one another and the parent state, or might act as a severing force. Though claiming descent from a common ancestry, the Greeks were never a homogeneous people. Æolians and Achæans in the mythic age, Dorians and Ionians in historic times, formed distinct branches, which were geographically and politically much subdivided; for the Greek unit was the city rather than the State in the modern sense, and the multiplication of such units tended to differentiation. From the parent city, the colony swarmed off like bees from a hive, and the colony itself, when prosperous, continued the process, till the shores of the Mediterranean were lined with Greek settlements which, though closely adjacent, might be not only politically distinct, but mutually hostile. Sicily alone,

before 550 B.C., held no less than twelve such colonies, a single one of which—Syracuse—is said to have had a population exceeding that of Queensland to-day.

No strong race sentiment united the Greeks as a whole; no long and glorious common history served to inspire their imagination with the idea of national unity. They were proverbially fickle, and endowed with a fatal genius for intrigue. Themistocles, greatest of Athenian admirals, was able to carry on treasonable correspondence with the Persians, and died a pensioner of Artaxerxes. Pausanias, the great general of Sparta and the victor of Platæa, readily accepted the gold of Xerxes. Under such conditions, it was inevitable that the scheme of national defence which Aristides initiated should end in failure. The problem, difficult for us, was, for the Greeks, insoluble.

The present development of the British Empire finds no parallel in the world's history. Not only does the scale of the interests at stake enormously exceed all the experience of the past, but the political conditions have no valid counterpart. On the one hand, the sea-borne trade of Greece, Carthage, and Rome in ancient times, and of Spain, Holland, and France in later days, was relatively trivial. On the other hand, self-governing Colonies in any way comparable to Canada, South Africa, and Australasia, have never previously existed. From out of the rich and varied teaching of the past the principles of the defence of a maritime Empire stand forth clear and unchangeable. As to the method of applying those principles, however, no light shines from the pages of history. Our problem is a new one; since the present conception of a Colony is a growth of the nineteenth century.

Burke plainly foresaw what has now come to pass, when he wrote—

> "I was ever of opinion that every considerable part of the British dominions should be governed as a free country; otherwise, I knew that if it grew to strength and was favoured with opportunity, it would soon shake off the yoke intolerable in itself to all liberal minds, and less to be borne from England than from any country in the world."

Free institutions established in the Mother Country must, as Burke foretold, be reproduced and extended in her Colonies: but this knowledge was purchased by the nation at a heavy cost—the loss of America. It is perhaps because France and Germany, our rivals as colonizing powers, have not yet attained to freedom as we understand the word, that they have so far entirely failed to create a single real Colony.

But during the period of greatest stress Great Britain had no Colonies in the modern sense. "America," as Burke stated, "was once, indeed, a great strength to this nation in opportunity of ports, in ships, in provisions, in men. We found her a sound, an active, a vigorous member of the Empire." This "great strength" was, however, potential rather than actual. In the contest for Canada, which formed a memorable episode of the Seven Years' War, the thirteen Colonies of North America did not exert a power proportionate to their population. In the New World a hundred thousand French colonists confronted fully two millions of the Anglo-Saxon race; but the latter were split up into separate communities geographically scattered and not organized for common action. In Virginia and along the Eastern slopes of the Alleghanies there was a fine fighting element composed of Scotch colonists from Ulster; but Virginia, whose troops had taken part in Braddock's ill-fated expedition, was far from the seat of war in Canada, and preoccupied in holding a long line of frontier against Indian aggression. Pennsylvania objected on principle to fighting, unless it was carried on by other Colonies in her interests. North and South Carolina, and Georgia especially, were in a backward state of development. Practically it was from the New England group of Colonies alone that real aid to the national cause was forthcoming. Republican in sentiment, and occupying a comparatively poor territory, they were intellectually in the van of progress. To them the French in occupation of Canada appeared in the light of a standing menace. As early as 1690 their ships and troops had attacked

Quebec, and in co-operation with Commodore Warren's squadron, they had captured Louisburg. At the time of Braddock's disaster, the New Englanders were prosecuting the war with success in Nova Scotia, and later they took part in the abortive operations of General Abercrombie and Lord Loudon. When at length Pitt determined to strike a vigorous blow in North America, New England militia fought under Wolfe in the second siege of Louisburg, as well as at Quebec, and were present under Amherst in the closing scene of the war at Montreal.* It is nevertheless just to state that the domination of North America by the Anglo-Saxon race was mainly secured by a great effort, naval and military, on the part of the Mother Country, that the Colonies did not contribute to this supremely important result in proportion to their capacity, and that of any true conception of the meaning of Imperial defence there is no sign at this period. The fighting in North America was an incident in the great struggle between Great Britain and France for Colonial supremacy. Colonists on both sides took part, and the French Canadians, better organized and far more united than their rivals, wielded a military strength out of proportion to their small numbers. The British colonists, on the other hand, were neither prepared for united action, nor unanimous in sentiment. The contest was supported by a part of them only, and was entered upon out of regard to local interests rather than to the claims of higher patriotism.

In the great war which began in 1775 by hostilities between Great Britain and the North American Colonies, whose most vital interests she had just secured, and ended with the treaty of Versailles in 1783, the national resources were strained to the utmost. In 1781, the people of these two small islands were fighting single-handed against France, Spain, Holland, the revolted Colonies of America, and Hyder Ali in the Carnatic. The great struggle was essentially

* During the Seven Years' War, the North American colonies raised, clothed, and paid about 25,000 militia.

naval, and as Captain Mahan states, "The sea power of Great Britain" was "unequal to the task laid upon it." By the navies of France, Spain, and Holland, American independence was conquered. Throughout this critical period, the British people derived some convenience from their Colonial possessions, but no material aid. In fact, the hostility of the North American Colonies, the direct result of gross impolicy, was alike the origin of the war and the cause of its general insuccess. Unhampered by her revolted Colonies, the Mother Country would have triumphed, even without their active aid, over the European Alliance, and this bitter experience was calculated to effectually blind her imagination to the possibilities of Imperial defence.

From 1793 to 1814, with a brief interlude, Great Britain was engaged in a new war of vast proportions, in the course of which France, Holland, and Spain were again arrayed against her, and for a time Russia, Sweden, and Denmark, menaced her with the so-called "Armed Neutrality of the North." The wonderful story is told with consummate skill by Captain Mahan, whose books should be read wherever the British flag flies. I borrow from him this eloquent summary:—

> "Great Britain will be seen to enter the war allied with many of the nations of Europe against France. One by one the allies drop away, until the island kingdom, with two-fifths the population of France, and a disaffected Ireland, stands alone face to face with the mighty onset of the Revolution. Again and again she knits the coalitions, which are as often cut asunder by the victorious sword of the French army. Still she stands alone on the defensive, until the destruction of the combined fleets at Trafalgar, and the ascendency of her own navy, due to the immense physical loss, and yet more to the moral annihilation of that of the enemy, enable her to assume the offensive in the Peninsula, after the Spanish uprising—an offensive based absolutely upon her control of the sea."

The result was victory on sea and land, victory which ushered in an era of peace, conferred a naval prestige still enduring, laid the foundations of the modern Colonial

system, and secured its unchecked development. In this gigantic conflict, involving the destinies of the British people, Colonial resources played a subordinate part. The possessions of Great Britain in 1793 were considerable in number. They supplied, in Burke's words, "opportunities of port," provisions and water; for most of them were geographically convenient in regard to naval operations. Colonial troops fought under the flag in the West Indies, and India rendered valuable assistance, especially in Egypt and Mauritius. But, except in Canada, the British Colonist was not, as yet, a real element of fighting strength. The lost Colonies of North America—then the United States—stood aloof, though driven into ineffectual naval hostilities* with France in 1798, and in 1812 they drifted for the second time into conflict with the Mother Country. The preoccupations of British statesmen, and a prevailing ignorance of the question at issue, afford the only excuse for this most unnecessary war, which proved ruinous to the commerce of the United States, and sowed seeds of bitterness not yet sterilized. In this unfortunate struggle, Canadian Militia proved their fighting capacity.

Throughout the long war which sprang from the French Revolution, the Colonies seem to have been viewed as outlying portions of the national estate, to be defended, as far as possible, by the Mother Country on the ground of their pecuniary value, and because the loss of territory involved a loss of honour and prestige. Their commerce was practically a British monopoly, and in the main the war, as Napoleon well understood, was a contest for commercial supremacy. As independent sources of national strength, they were as yet unrecognized.

In the dawn of our colonial era, Newfoundland was regarded as of primary importance. "A successful attack

* "The mercantile shipping of France had already been so entirely destroyed by Great Britain, that she suffered far more from the cessation of the carrying trade, which Americans had maintained for her, than from the attacks of the American navy."—*Mahan.*

on the Newfoundland fleet," said Raleigh, "would be the greatest misfortune that could befall England," since the fisheries were the "mainstay and support of the Western counties." The commercial centre then shifted to North America. "This great city," said Burke of Bristol in 1774, "a main pillar in the commercial interest of Great Britain, must totter on its base by the slightest mistake in our American measures." At the end of the eighteenth century, the West Indies occupied the first position. Their trade was at least one quarter of the total commerce of the United Kingdom. "If our islands should fall," wrote Nelson, "England would be so clamorous for peace that we should humble ourselves." In the West Indies, therefore, hard fighting occurred, in which both combatants, and the French especially, made use of native troops.

Since the crowning triumph of British sea power in the wars of the French Revolution, the national conditions have undergone an entire change. Captain Mahan has shown that between 1793 and 1800 the total war loss of British trade did not exceed 2½ per cent., and was probably less than 2 per cent.; but this small result of the immense efforts of our enemies was not the most remarkable feature of the period. As the control of the sea was established by her Navy, the commerce of Great Britain steadily increased. The fresh impetus was actually given during the great conflict, and when in 1814 a general peace swept away all external hindrances, the way was clear for an enormous commercial and colonial expansion. A total trade of about £112,000,000 in 1800 has grown to about £970,000,000 according to official returns for 1893; but there is reason to believe that the latter figure is quite inadequate, and that, estimated according to the methods applied in the same return to the trade of foreign Powers, the figure should be fully £2,000,000,000.* It seems certain that about two-thirds of the entire sea-borne commerce of the world is British. Taking the Suez Canal

* See "Navies and Commerce," p. 92.

as a gauge, the proportion of the whole traffic credited to the three leading Powers in 1893 was:—

Great Britain	...	...	...	74·18 per cent.
Germany	...	...	...	7·43 ,, ,,
France	...	...	...	6·53 ,, ,,

Returns of steam shipping, which are doubtless trustworthy, give for 1895:—

				Steamers.	
				Above 17 knots.	Total.
Great Britain	...	...	...	90	7185
Germany	...	...	...	14	912
France	...	...	...	17	555

Such figures speak for themselves. The predominance of the British nation in the trade of the world is absolute and unapproached.

The Colonial development upon which this predominance is largely based has been gigantic. Canada, which became British territory in 1763, has passed successively through a period of military rule, and a Provincial constitution inaugurated in 1791 and greatly extended in 1859, to the powerful Federation established in 1867. A population of 300,000 in 1812 has grown to 5,000,000; the public revenue has reached £8,000,000; an external trade of £49,000,000 has been built up. The Cape of Good Hope, restored to the Batavian Republic by the peace of Amiens and recaptured in 1806, has in 90 years become a great self-governing Colony with a population of nearly 2,000,000 and a trade of about £25,000,000. East Australia, with a single settlement of 9000 souls in 1810, has developed into New South Wales, Victoria, and Queensland, with an aggregate population of more than 2,000,000 and a trade of about £81,600,000; New Zealand, British territory only since 1840, has already a population of at least 600,000 engaged in developing her rich resources, and in maintaining a trade exceeding £16,000,000.

Time does not permit me to run through the roll of our Colonial achievements during this century. In 1800, there was no single self-governing Colony as the term is now

understood. There are now eleven British communities invested with the control of their affairs—eleven vigorous centres spread over the world, from which radiate the principles of civil liberty transplanted from the Mother Country.

The change in the point of view from which we regard the Colonies is complete; and the foresight of Burke has been abundantly justified. "As regards our Colonies," wrote Mr. Gladstone twenty-five years ago, "we have gradually reached the invaluable knowledge that one and the same secret of a free autonomy is a specific alike for the relief of the Mother Country, the masculine and vigorous well-being of the dependency, and the integrity of the Empire." No longer hampered, as in Burke's day, by "prohibitions, guards, penalties, and forfeitures," the Colonies have created a trade of £79,000,000 with foreign countries—a trade previously unknown, and possessing a political importance beyond its intrinsic value.

The magnificent fabric of the Empire thus rests wholly upon a commercial basis. It does not bear the marks of deliberate design; it is not the result of accident, but the product of natural forces springing from the genius of a free people. One condition was, however, vital to its construction. The instinct of sea power, born in the days of the Saxon kings, and handed down by a long line of great seamen, culminated in the wars of the French revolution. Naval supremacy, finally established at Trafalgar, was the necessary guarantee of secure Colonial development. Under the ægis of the British Navy, too little recognized but all present, that development has attained its present dimensions. The menace remained, though the actual assertion of power ended in 1814, and for more than eighty years the vast trade of the Empire has gone free upon the seas. If the hotbed Colonial system, which finds favour and extremely little success in France and Germany, has not commended itself to Great Britain, and if subsidies for secondary objects have not always been forthcoming, the Mother Country has, nevertheless, provided for her Colonies

the guarantee to which is due their whole progress and prosperity. The human mind easily forgets to inquire into the causes of accustomed phenomena, and the debt of the Colonies to the Navy is not even now fully recognized. Yet, in these eighty years of uninterrupted commerce, there have been many occasions when only the menace of an inadequate fleet stood between the nation and war; while thanks to naval force alone, the campaign of 1854–5 imperilled no Colonial interests. The course of recent events has demonstrated in the most striking way the effects of a substantial increase to the Navy.

The territorial extent of the Empire has reached 11,000,000 square miles, and embraces half the points of vantage of the world. The subjects of Her Majesty number at least 346,000,000, of whom more than 50,000,000 are of our own race. The aggregate public revenue amounts to £197,000,000; the naval and military expenditure to about £53,000,000, of which the Colonies account for less than £1,500,000. The land forces number more than a million of armed men, of whom upwards of 453,000 are professional soldiers;* and, in addition, there are fully 300,000 men in the prime of life who have received military training.

The potential strength and the wealth of resources which the above figures imply are unrivalled, and the British nation, thoroughly organized for defence, would defy aggression. If the national confidence does not as yet correspond to the available strength, the reasons are evident. There is, on the one hand, a wide-spread and a well-founded sense of unreadiness, and on the other hand a curious tendency towards self-disparagement in military affairs. The myriad bayonets of the great Powers of Europe dazzle our imagination; the tremendous drama of 1870–1 haunts our dreams. We unconsciously measure our strength by continental standards, forgetting our own history and our special conditions. While it is naturally the policy

* Including First Reserves at home, Hyderabad Contingent, and local regiments in India.

of our rivals to assure us of our impotence, there are, nevertheless, signs that the dormant strength of the British nation is not unmarked, and that the astonishing vigour shown during the last period of trial has not passed wholly out of remembrance. Nations, however, like individuals, are for the most part taken at their own valuation. A Power, rich and prosperous, impelled towards expansion by its inherited instincts, and by the natural vigour of its people, yet regarded by foreign nations as weak and unprepared, must always tempt aggression. The apparent disproportion between the activity displayed in every part of the world, and the organized power at its back, is one of the principal causes of our general unpopularity.

To confer on the Empire strength proportionate to its means; to insure such due forethought that its immense resources may be quickly and smoothly made available in the event of war; to define the obligations of individual members; to decentralize measures of preparation, while retaining the necessary power of imparting an undivided impulse; and, by thus firmly welding together the scattered units of the Empire, to inspire universal confidence—these are the objects of national defence. Their full attainment would be the surest guarantee of peace, and in one respect at least the omens are favourable. The old view of Colonies as the property of the Mother Country has disappeared. They are now regarded as integral parts of the Empire, contributing to its resources, its prestige, and its stability. The mutual interdependence of Great and Greater Britain is beginning to be understood. We feel the truth embodied in Sir John Robinson's words: "If Greater Britain should fall to pieces, then God help Great Britain." Mr. Deakin spoke for the whole nation, when he declared that "We cannot imagine any description of circumstances by which the Colonies should be humiliated or their powers lessened, under which the Empire would not be itself humiliated, weakened, and lessened." *

In a greater or less degree the whole prosperity of all

* Conference of 1887.

the members of the Empire depends upon sea-borne commerce; to most of them it is vital. To Canada, to South Africa, and to Australasia, a sustained interruption of ocean communications would mean ruin. India grows more and more sensitive even to minor trade fluctuations. Singapore and Hong-Kong are simply great trade centres in themselves almost resourceless.

The first postulate of Imperial defence is, therefore, a navy able to maintain open communications. A trade which *must* continue during war can be protected on the seas alone, and fortified harbours—never of first-rate importance to the British nation—have lost value in proportion to the necessity for the sustained movements of the mercantile marine. The Empire is the proof that, in the past, the Navy was able on the whole to guard the ocean highways.

Commerce-destroying is sometimes spoken of as if it were a new object of war, a new form of national peril. It is, in actual fact, the oldest of all methods by which maritime Powers have sought to injure their enemies. Against Great Britain it has been tried over and over again. At the beginning of the present century it was attempted with deliberate purpose, backed by all the force at the disposal of Napoleon. It broke down absolutely, and Napoleon, failing at sea, was driven in despair to invent the so-called "Continental system," which demanded the military domination of Europe for effective accomplishment, and entailed the downfall of the inventor. Nothing stands out more clearly from the pages of history than that successful commerce-destroying is possible only to a Power which, by naval victories or by menace, has established supremacy, physical or moral, over the fighting fleet of its adversary. The idea that an inferior Power, keeping its battleships in port, and declining fleet actions, can, nevertheless, bring the trade of an enemy to a standstill, has no basis either in reason or in experience.

The *Alabama*, a slow steamer, wrought easy havoc among sailing ships. Her commander has shown how her

career might and ought to have been cut short; but in any case the restrictions imposed upon sailing vessels render them indefensible in most waters against the attack of steamships. The great majority of British sailing vessels must be laid up during war with a naval Power, and this is a contingency of which Imperial defence must take account. The steam mercantile fleet of the British Empire is, however, never employed up to its full capacity. We have an available reserve of transporting power,* and in less than a year large numbers of fast steamers could be built. On the other hand, a steam mercantile marine, by the elasticity, of course, open to it, and by its power of dispersion in dangerous waters and of concentration upon points which can be guarded, is far more defensible than was the trade which, under the effective protection of the Navy, throve during the wars of the past. Again, the convoy system can now be applied with advantages formerly unattainable. Finally, the American War has shown the difficulties of maintaining commercial blockades. There were vessels which ran into southern ports almost with the regularity of mail steamers, in spite of the utmost efforts to restrain them, and it should never be forgotten that the Confederate States possessed no sea-going fleet.

The primary duty of the national Navy may be best defined as "the protection of the sea communications of the Empire." I prefer this definition to any other, because it alone is adequately comprehensive, and because it expresses the broad view of the relations of the Navy to the Empire as a whole, and serves to correct the narrow local ideas which occasionally find utterance both at home and in the Colonies. The Navy is and must be essentially the defensive force of the Empire. Its functions cannot be localized; the national security turns upon its effective action as a single unfettered force. To Australasia, the Channel and Mediterranean Fleets are fully as important

* In 1885, no less than 102 large steamers were employed in conveying troops and railway plant to Suakim. The whole sea-going steam tonnage of Russia would not have sufficed for the purpose; but British trade was quite unaffected.

as the squadron in Australasian waters; the interests of Great Britain are defended in China as well as in the Channel.

That this view is gaining ground is proved by the following extracts from Colonial newspapers published six thousand five hundred miles apart. The *Cape Times* has stated—

"We want to strengthen the fleet, not to split it up and distract its forces. The ideal of the immediate future is not a network of petty Colonial fleets which might be chaffering about differences of opinion in the face of the Mede, like the auxiliary ships of Athens before Salamis. The ideal is that while the central power keeps, as keep it must for many a long day, the responsibility for the defence of the Empire, and wields as with one brain and one arm the great weapon which secures this, the scattered parts that depend on this protection should care also to help with the cost."

At about the same time the *Brisbane Courier* referred to "the tremendous importance of the British command of the sea to Australasia," and added—

"Probably no other community of four millions in the world has so large a commerce exposed to so great an ocean risk. This trade reached its present dimensions, and is growing rapidly now under the shelter of the British flag. It is the strength represented by that flag which has preserved peace on the ocean for us."

These wise and statesmanlike opinions would not have been forthcoming ten years ago. In them we may surely find grounds of hope for the cause of national defence.

I do not propose to enter upon the much-vexed question of a general Colonial contribution in aid of the one pre-eminently national force. When once the first principle of Imperial defence is fully understood, this question will resolve itself. The arrangement voluntarily entered upon by the Australasian Colonies, if defective in some respects and conceived in a spirit insufficiently catholic, is nevertheless a satisfactory sign of an awakening sense of a common interest and a common responsibility. Meanwhile, I may point out that the Navy must be homogeneous in organization, and controlled during war from a single directing

centre. There are some few ports where local small craft might find useful employment; but the Navy which guards the sea communications and unites the scattered members of the Empire, must be one and indivisible. While the provision and maintenance of sea-going Colonial warships would be an extravagant and an ineffective policy, the scattered units of the Empire can nevertheless afford valuable assistance by improving the "opportunities of ports" and by facilitating the creation of local reserves of men. The resources of the Navy are too much centralized within the United Kingdom. Each naval station should be rendered capable, as far as possible, of supplying in every sense and of repairing the ships of its squadron during a period of war. The present system of manning the Navy is not sufficiently elastic, and there are already in some Colonies quasi-naval forces, and in others excellent material, which if periodically trained on board Her Majesty's ships and drilled on shore to the service of naval armaments, would form invaluable reserves in time of need. Herein lie possibilities of advantage which no other Power possesses in equal measure—possibilities which any scheme of Imperial defence must take into due account.

As regards the necessary standard of naval strength, it would be improper for me to offer an opinion. I may say, however, that this standard should be based upon the naval resources of our possible enemies, and that calculations by which a proportion is sought to be established between the tonnage of our sea-borne commerce and that of our warships are misleading. Responsible naval authorities are well able to tell us what amount of naval force is required to control the navies of the Powers whom we must be prepared to meet, and the recent awakening of public opinion is a guarantee that, for the present at least, there will be no slackening of effort on the part of the Mother Country. One new consideration cannot be passed over. In the wars of the past, our rivals were able to excel us in speed of shipbuilding. This great advantage has now passed to us, and Great Britain alone of all Powers could

build and complete a battleship for sea in eighteen months; while, if, as we are sometimes asked to believe, the naval conflicts of the future are to be decided by small craft, our powers of construction are absolutely unrivalled.

A Navy able to maintain open communications is not merely the first postulate of national defence, but the prime condition of security. No accumulation of highly trained troops on shore, no fortifications equipped with all the luxuries which modern science offers, will of themselves avail should the sea communications of the Empire be definitely severed. Both are necessary in due measure; but, if it were the case that the national means ran short, military demands should, as Lord Wolseley has stated, be unhesitatingly set aside.

A Navy able to keep open the communications of the Empire will, of necessity, suffice to debar an enemy from invasion, whether of the United Kingdom, or of the great self-governing Colonies. Large hostile expeditionary forces cannot be transported across the seas, in face of a superior fleet, without risking the fate of Conflans in 1759, or incurring the disaster which befell Napoleon's Egyptian venture in 1798. In the many projected invasions of this country, British aid has invariably been counted upon. Even Napoleon reckoned, with singular lack of judgment,* on a popular rising in his favour. In none of the members of the Empire could a modern invader pretend to seek effective allies, and one of the principal inducements to accept naval risks has disappeared.

Small expeditions, directed not to effect territorial conquests, but to destroy national resources, may, nevertheless, as in the past, evade a superior navy. If launched on distant errands, their task is distinctly more difficult and dangerous now than formerly, in consequence of the restrictions imposed by coal supply; but we dare not overlook the contingency. Such expeditions, whether accompanied by troops, or carried out by cruisers, are of the

* "He did not understand that, though discontented with their Government, they (the English) were extremely jealous of foreigners." —*James.*

nature of raids. Wherever national resources necessary for purpose of war are accumulated, local means of resistance against a raid are needed. Wherever valuable property, easily accessible from the sea, is gathered together, local protection may be desirable.* Thus is justified the fortification of certain harbours by a Power which depends for existence on naval supremacy. The real defence of those ports lies upon the seas; but just as the commander of a great field army, operating in a country everywhere traversable by light cavalry, would provide defences for his depôts, so a nation possessing a dominant navy must be prepared against injury by small forces which may evade its warships. The object of an enemy under such conditions being merely to effect the maximum damage in the shortest time, and with a minimum risk of becoming compromised, it follows that the defences to which I refer may always be moderate in scope, but will depend on the geographical propinquity of the possible base of attack. A harbour which could be raided by a force able to retire to the shelter of its own defences on the following day, obviously occupies a different position to one lying four thousand miles from such shelter.

Here arise a host of technical considerations and details into which I cannot enter. The principle for which I contend is, that the entire question of the selection of harbours for defence, and of the nature of the requisite defence, is one which needs to be dealt with on broad Imperial lines. It is not a number of geographically isolated States, with interests only partially coincident, which have to be defended, but a united Empire linked together by a powerful Navy. In times of peace, the objects of the members of this Empire must frequently take a local shape —this is a healthy sign of individual vigour—but Imperial defence recognizes no separation between Colonial interests and those of the United Kingdom.

* Local protection in this sense is evidently a measure of insurance which each Colony is bound to take into consideration. The means necessary to deny a harbour to a hostile cruiser are simple and inexpensive.

Great efforts have been made by several of the self-governing Colonies for the fortification of their ports. Large sums have thus been ungrudgingly expended, while other Colonies have freely voted generous contributions for the same purpose. At the same time, the Home Government and that of India has devoted relatively enormous funds to the defences of the ports under their direct charge. The spirit evinced by these measures is altogether admirable, and if the results are not in all cases satisfactory, the cause can be clearly traced to the way in which the several local problems were approached. Coast fortification presents many fascinations, to which the number and variety of its weapons lend force. The question, "How can this port be most efficiently defended?" leads straight to demands which have no end. Each successive professor of the art will discover some new defect, or will advocate as essential the adoption of some new weapon. Finality will prove to be unattainable. The principles of national defence, however, require that the question should be put as follows:—"This port belongs to a maritime Empire, which depends for existence on seaborne trade and open harbours. It cannot be attacked in force till the command of the sea has been lost. The naval resources of possible enemies and the position of their bases are known. Hasty raids for purposes of destruction have to be guarded against. Having regard to the geographical position of the port, what permanent defences do you propose?" The difference in the point of view is vital, and it may happen that the expert in matters of fortification is not well qualified to give an authoritative answer.

An exaggerated—even a wasteful—capital expenditure on coast defences is in itself a minor evil. Perversion of national aims, and ever-increasing expenditure on sedentary forces which, as history shows, will be of little account in war, constitute the main objection to ill-advised fortification. The theory, that by means of fortification naval deficiencies can be supplied, is for us distinctly dangerous.

Happily, there are everywhere signs that this theory is, for the moment, passing out of favour.

The means of destruction at the disposal of a hostile ship in an unfortified port are rigidly limited. Shipping may be sunk if accessible to fire or to unresisted boat attack; dock caissons may be injured, if exposed. Shell may be thrown into a town, but the damage would not be great, and unless means of replenishment were close at hand, nothing approaching to a heavy bombardment would be attempted. In order, therefore, to inflict substantial injury, men must be landed.* Hence arise the immense advantages of possessing an effective military force on shore. Knowing the ground, such a force becomes formidable beyond its numbers to an enemy whose time may be short, and whose ships may be rendered *hors de combat* by a loss of *personnel*. Even where coast fortifications are absent, the presence of a trained and well-armed mobile force will confer substantial protection. Where such fortifications exist, they are—unless known to be unprepared—most unlikely to be subjected to direct attack—a process which has rarely commended itself even to the superior naval Power. As on a small scale at Bastia and at Calvi in 1794, and as recently on a large scale at Port Arthur and Wei-hai-wei, it is the back door which is usually selected. In these, as in a hundred other cases, coast defences helplessly fell as a consequence of operations in which their specialist garrisons could play no part. Even from the local point of view, field troops should be regarded as the most important factor in coast defence. Oblivion of this consideration, induced by the fascinations of fortification, is by no means confined to the Chinese.

I have designated the Navy as the defensive force of the Empire, notwithstanding that its action should be strategically offensive, in the sense that it must be enabled, as in the past, to regard an enemy's coast-line as its

* The striking experience of Foochow shows the small amount of material damage capable of being inflicted without putting men on shore.

frontier, and observing his ports, to court fleet actions. The offensive power of a navy, however strong, ends with the shore. We cannot, during a naval war, afford to commit our sailors to operations on land. As in Egypt (1800), in Mauritius (1810), and in numerous other instances, the absolute need of military forces must arise. To facilitate the task of the Navy in guarding our sea communications, it may be necessary to employ troops for the capture of positions which aid the naval operations of an enemy. There comes a point, at which the employment of military force is alike more economical and more decisive than any action possible to a navy. And, further, a defensive policy will not suffice either to bring war to a rapid conclusion, or to secure adequate guarantees for a lasting peace. For all these reasons, mobile troops, not sedentary garrisons, are supremely important. "If we be once driven to the defensive," said Raleigh, "farewell might."

So soon as the Navy has obtained physical or moral supremacy, military force—the real offensive weapon of the nation—is set free for action. The idea of intervention in a Continental struggle, by handing over two Army Corps to become appendages of the armed strength of a Power possessing twenty, may be dismissed as a vain dream. It is not thus that the national honour can be guarded, and the national interests secured. Obligations to allies, if such exist, cannot thus be most effectively discharged. On the other hand, in the employment of expeditionary forces—"conjunct expeditions," as they used to be termed—against the outlying possessions of an enemy who is restrained by the Navy from adopting similar measures, a tremendous weapon lies ready to our hands. Immense resources in steam shipping and convenient harbours combine to facilitate over-sea operations, and our military forces, if duly prepared, possess an offensive power out of all proportion to their numerical strength.

History clearly indicates that the primary duties of the military forces of the Empire in war must be offensive, and that their functions in regard to local defence, whether

at home or in the Colonies, are subordinate. Modern conditions add force to these considerations. Nevertheless, for reasons easily understood, this great principle of national policy is little recognized, and defensive ideals are permitted to inspire our military organization and dictate our measures of preparation.

During the old wars, the United Kingdom and India alone furnished men and material for equipping over-sea expeditions. The time has come when we may confidently expect the co-operation of Greater Britain in this most important branch of national defence. The armed strength of the Colonies now reaches a total of more than ninety thousand men, and evident strategic advantage lies in the power of operating from distant bases. The patriotic action of New South Wales in 1885 is significant of the new possibilities. Many of our Colonial forces are models of their kind, and for warfare of the nature implied, are distinctly better fitted than European conscripts. Other such forces are in a somewhat backward state, and some Colonies neglect to provide themselves with military organizations. Much has, however, been effected of late years in this direction, and the education of national opinion, supplemented by well-advised assistance from the Mother Country, and supported by energy and tact on the part of Colonial Governors, would bring about great results. Colonel Man has lately described* what has been done in Trinidad; but, as he has pointed out, this one small island maintained in 1834 a force of four thousand five hundred men, officered largely by loyal subjects of alien descent. It is impossible not to believe that in other Colonies—as, for example, Mauritius—excellent material for the formation of military forces only awaits a fostering hand.

Each Colonial force, however small, should regard itself as an integral portion of a great Imperial organization, and should be prepared, if necessary, to act outside its own territory. From the strategic point of view, Greater Britain may be divided into spheres of action corresponding

* Paper read at Royal Colonial Institute on December 2, 1895.

to the naval stations of the Fleet. All the local forces of the Dominion of Canada, the West Indies, South Africa, Australasia, and China, should in case of necessity be available for service in any part of the naval commands,* to which they severally belong.

The regular troops of the British army and of India are at all times available for service in any part of the world. In the event of national emergency, the militia should be enabled, by proclamation, to share this distinction, and the employment of volunteer battalions in the Mediterranean garrisons should be facilitated. I believe that this extension of their spheres of usefulness would be welcomed by the forces in question. To accustom them to the contemplation of a purely defensive *rôle*, waiting at home for an enemy who cannot arrive till the national cause is already lost, appears a grave mistake.

There is no fear that local defence would suffer neglect, by the adoption of measures conferring greater elasticity upon our military arrangements. The local view may be safely counted upon to assert itself. If invasion were really impending, it is certain that volunteers would not be sent out of the country. If Melbourne is imperilled, Victorian troops will not be transported to Tasmania. Such contingencies depend entirely on the naval situation, and the real danger is that a too rigid system may prevent a needed reinforcement of the troops of one Colony by those of another; or that the chance of a strategic stroke of extreme importance to the national cause may be lost by reason of unpreparedness.

Spheres of action being allotted to Colonial forces, regular troops reinforced by them become available for expeditions which are certain to be necessary in a great war. To regular troops, assisted perhaps by native irregulars, must be entrusted the defence of the land frontier of India. Upon this question I speak with the diffidence

* Canada, Newfoundland, and the West Indies would thus all belong to the North American station. I should prefer to add China to the Australasian sphere.

necessary to one who has not the advantage of knowing the country. I have, however, carefully studied the matter in the light of our many frontier campaigns—campaigns which of late years have been based upon a well-equipped railway system, with the great resources of populous India at its back. Considering the enormous transport required even for operations so limited in scope as those in Chitral, it is my deliberate opinion that for many years Russia will not be in a position to threaten serious invasion. Plans have been lightly sketched by alarmists; but I do not find any real attempt to show how our Asiatic rival is to procure and to feed the vast number of transport animals necessary for operating in strength across the most difficult frontier in the world. Central Asia cannot compete as a base with India. The long single line of railway which runs from the Caspian to within one hundred and seventy miles of the frontier of Afghanistan is not comparable as a line of military communications to the sea, which can carry the resources of the Empire to the mouth of the Indus. That curious distrust of our military strength to which I have referred, tends to blind us to the great increase of the efficiency of the Indian Army achieved in recent years. We were never so strong in India as now, and so long as internal tranquillity is assured, there are no present grounds for apprehension in this portion of the Empire. Russia has many Asiatic projects in hand; but for years the invasion of India will not find place among them. On the other hand, full advantage will certainly be taken of the leverage supplied by our fears, which experience has shown to be peculiarly effective. Our policy in regard to Russia has for some years been characterized by a want of dignity, and might well be replaced by a mutual understanding.

The long land frontier in North America cannot be passed over in discussing national defence. In spite of recent deplorable events, I do not believe that any valid ground for war between the two kindred races will ever arise. Such a war would be a crime against light and

liberty. Its necessary result would be to arrest for a century the progress of that Anglo-Saxon form of freedom of which the whole race is justly proud, and to destroy the brightest hopes of the future. In any case, the defence of her long frontier cannot be left to Canada unaided, and so long as it is her free wish to remain a member of the Empire, she must be and she will be supported with the whole force at our disposal. To state this proposition is, of course, to proclaim the reciprocal obligations of the Dominion.

It would be easy and utterly useless to present a detailed plan of Imperial defence. We are not prone to adopt paper schemes which possess merely an academic interest, and the practical problem before us cannot be thus solved. It is necessary first to create a body of broadly national opinion, and to lead it in the right direction. Time will do the rest, and the pace cannot be forced.

The points on which I desire to fix attention may be summarized as follows :—

1. The recognition of the Navy as the defensive force of the whole Empire—the force which stands between each member and invasion, the force which alone can guard the commerce on which each member depends. In time, such recognition would doubtless assume a practical form, each member of the Empire aiding the national force in the way best suited to its circumstances.* The military contributions of some Crown Colonies, which cannot be fixed on any rational basis, would then terminate.

2. The adjustment of measures of local defence in conformity with a definite policy, based upon the special conditions of the Empire.

3. The encouragement of local forces wherever suitable material exists, such forces to be available for employment in case of need within defined spheres. Assistance in the form of arms to be freely given by the Home Government to the poorer communities.

* Money contributions do not by any means constitute the only form which such aid might take. The maintenance of naval reserves would in such a case as Newfoundland be preferable.

4. The welding together of the military forces of the Empire, each unit of which, in addition to its territorial title, should bear a distinguishing number connecting it with a general organization.

5. The decentralization of naval and military stores, so as to enable the national forces in each sphere to be as far as possible independent on the outbreak of war. The distribution to be made with regard to the nature of the operations which might have to be undertaken. The concentration of *matériel* of war and its manufacture* in the United Kingdom, which was perhaps necessary at the beginning of the century, is an evil under the changed conditions of to-day.

6. The provision of machinery for the full discussion and settlement of all questions directly or indirectly bearing upon Imperial defence. The present means are altogether inadequate. Matters affecting several members of the Empire cannot be satisfactorily dealt with by written despatches, and the time has long passed when such matters can be determined by a central authority. Conferences in which local views are personally represented are now essential.

The principles above stated practically imply the federation of the Empire for purposes of defence. If political federation by groups of Colonies existed, the task would be simplified. There is no reason, however, why organization for Imperial defence should be delayed.

In each of the five groups a representative body might be established holding session each year, and varying its place of meeting. Such a body would be in touch with local defence committees and in direct communication with the standing committee in London, with which the Agents-General should be associated. It would have proper records and would accumulate information in regard to naval and military matters within its sphere.†

* In this respect India is making great advances.

† The centralization of all "intelligence" in London would prove a great drawback in war, and in peace is not without disadvantage.

It would bring questions of defence to a focus, and would take note of all military progress or backsliding.

Larger questions of national defence could be settled by conferences held in London at regular intervals of five years. The Conference of 1887, though limited in scope, had far-reaching results, in the clearing up of matters effectually obscured by over-much paper. If to such a Conference were submitted the task of filling in the details of the machinery which I have suggested, the work would be successfully accomplished. It is only by taking all the members of the Empire into council that an effective organization for Imperial defence can be attained. To the objection that such conferences would have no executive power, I reply that what is first needed is mutual understanding in regard to questions of defence, that good-will and an earnest desire to co-operate in upholding the national cause abound, that light and leading alone are needed to enable the immense resources of the Empire to be rendered available for purposes of war, and that the impulse must come from the Mother Country. Meanwhile, it behoves all Colonies to look earnestly to their military forces,* remembering that men trained and equipped for field service are of far more importance to the national cause than fortifications and their many adjuncts.

The greatest national interest is peace. The spirit of aggression which marks some periods of our history has been exorcised by the development of that commerce upon which our whole prosperity has come to depend. With heavy stakes in every sea and in most lands, with rivals whose unconcealed jealousy casts dark shadows across our onward path, the nation must stand united in the defence of its integrity and its honour, or fall like imperial Athens.

As Mr. Chamberlain has recently pointed out,† we are

* The reductions of military expenditure which have taken place in certain Australasian Colonies are to be deplored even from the purely local point of view, apart from national considerations. A State which regards preparation for defence as the readiest subject for its economics is like an individual who, at a moment of temporary financial pressure, abandons, first, his insurance policies.

† November 6, 1895.

approaching a new parting of the ways. Irresistible forces are at work which may bring about a consolidation of the national strength, or tend towards national effacement. The old order has changed, and new conditions have arisen which call for practical recognition. We can so organize this great Empire, that the unknown future may be faced with confidence and hope. If we neglect the task, our brilliant history will, before long, close with the despairing epitaph—

. . . . Occidit, occidit
Spes omnis et fortuna nostri
Nominis. . . . .

It is for statesmen at home and in the Colonies to make choice between these alternatives.

G. S. C.

THE NAVY AND THE COLONIES.*

THE most probable dissolvent of the Empire is ignorance. A mistake of policy on the part of the Imperial Government, such as was perpetrated in regard to New Guinea, or such weakness as has been displayed in relation to Newfoundland, may well shake the foundations of Colonial allegiance; but a far greater danger arises in that mutual ignorance of which there have been abundant signs. The generation which is now rising in Australia knows little of the mother country, her history, and her place among the nations. The high pressure of Colonial life allows scant time for the study of Imperial problems, and a certain narrowness of view is the inevitable result. The young communities which are springing up across the seas feel conscious of their vigour, their growing prosperity, and their political capacity. It is perhaps natural that they should not pause to consider the basis on which the whole structure rests—the conditions under which alone they exist. We may smile at the Queensland writer who regards Great Britain as "a composite grandmotherly old wreck, tottering towards an open grave;" but he is doubtless in sober earnest. He really believes that this is an accurate description of the first naval Power of the age—a Power which is governing two hundred and fifty millions of people in India, increasing its commercial enterprise every year against all rivals, and exhibiting vigorous activity throughout the world. Clearly there is a deplorable

* *United Service Magazine*, November, 1890.

amount of ignorance in Queensland, or rubbish of this kind would not be tolerated for a moment.

Unfortunately, we at home have little right to cast stones. The generation now uprising, which may be called upon to decide Imperial questions of the first importance, is not being in any way equipped to meet its grave responsibilities. One of the first objects of any system of national education should be to teach Imperial geography; but the School Boards, amid many superfluities, cannot find time to fulfil this obvious requirement, and the middle-class schools are as oblivious of their plain duty. The result is a mutual ignorance, in which lurks danger to the future relations of Great and Greater Britain.

Some aspects of this ignorance are strikingly brought out in an article on the "Loyalty of the Colonies," published in the *Nineteenth Century* of August, 1890, where, in the form of a dialogue between a "Colonist" and a "Globe-trotter," Dr. Bakewell sets forth a variety of opinions, important by reason of his evident conviction. It is well that we should be reminded that after-dinner speeches are not infallible guides to the understanding of real Colonial feeling, and it is most important that we should know not only what that feeling is, but on what it is based. Right or wrong, the views which are put into the mouth of "Colonist" are held in Australia, and appear from time to time in a certain section of the Colonial press. These views are seldom combated, wildly fallacious as they are; and "Globe-trotter," who has a splendid opportunity thrown open to him, is—like his class generally—perfectly incapable of making use of it.

According to "Colonist," mere sentiment towards the mother country could not be counted upon as a factor in war. "Has she ever made any sacrifices for our sakes?" he asks. "She has lent us money, it is true; but we do not usually feel any specially strong affection for our creditors." As a matter of fact, Great Britain is making heavy sacrifices for her colonies every day, as their relatively insignificant military burdens amply testify. If history

has any teaching, sentiment has played an enormous part in the affairs of nations, and must play a still greater part in the future, now that democracies capable of thinking and acting in mass will feel its sway. It is deep-rooted sentiment alone which enables us to wrangle with the United States to-day in terms which would be perilous in the case of any other great Power, and in the saying of Admiral Josiah Tatnall, that "blood is thicker than water," there lies a profound truth which New Zealand, *pace* Dr. Bakewell, will abundantly illustrate if the occasion should arise.

Sentiment may, however, be an insubstantial basis on which to rest the future relations of Great Britain and her Colonies. It cannot be gauged; it may waver with the passion of the moment. The "purely commercial point of view," which Dr. Blakewell prefers, may be superior in all respects. Here at least we are on solid ground; for the great principle of self-interest is eternal. Which way lies the self-interest of the Australasian Colonies?

Their proper course in the event of war is clear to the mind of "Colonist." "We should declare our independence at once, and with that issue a declaration of neutrality; neither party would care to attack us, for our naval force, small though it would be"—two second-class torpedo-boats in the case of New Zealand—"would suffice to enable us to obtain respect as independent republics. The Australian navy would be at least as large as that of a South American Republic." This course is evidently safer, "from a purely commercial point of view," than incurring "the risk of having our port towns laid under contribution, and our territory invaded, just for the sake of supplying the British fleet with coals and provisions." And, unfortunately, there are persons capable of accepting this remarkable plan of campaign, so simple, so practical, does it appear.

Leaving the other Colonies out of the question, New Zealand has an annual export trade of £8,985,000, of which no less than £7,036,000 goes to the mother country.*

* Figures for 1893, Colonial office list, 1895. In addition, about

It is by this trade that New Zealand exists. It is thus that she pays the interest on her debt. Destroy this trade, and she is financially ruined. She cannot pay in specie; if she repudiates, who will lend her another farthing? Only the Imperial connection, and the guarantee provided by the great Navy of England, have enabled the Australasian Colonies to borrow so cheaply the large sums without which their rapid development would have been impossible. The trade of the mother country with the Australasian Colonies forms a small fraction of the vast total of her commerce; but to those Colonies it is the life-blood. Their principal markets are within the bounds of the Empire, and new markets are not easily created. Nearly the whole of their exports might be considered contraband of war—would undoubtedly be so considered by any belligerent by whom advantage could be thus obtained. Again, the ships which carry the commerce on which the whole prosperity of these Colonies depends are almost entirely British,* and as such, liable to capture or destruction, unless transferred to a neutral flag, an operation surrounded with almost insuperable difficulties and requiring a considerable time. There is nothing more certain than that the position of a weak neutral, in whose commerce belligerent interests were involved, would be intolerable. What Power would recognize for a moment the "declaration of neutrality" issued by one of the Australasian Colonies—self-proclaimed a state —with the avowed intention of evading consequences? "To secure respect to a neutral flag," wrote Washington,† "requires a naval force organized and ready to vindicate it from insult or aggression," and the bitter experience of the United States amply bore out the truth of his words. Australasia to-day, dependent for existence on

£1,346,000 goes to other British possessions — who would not all proclaim themselves neutral republics—and about £602,000 only to Foreign States.

* Out of a total tonnage of 1,258,000 which cleared from New Zealand ports in 1893, only 108,000 sailed under foreign flags.

† Eighth Annual Address, 1796.

secure commerce, and maintaining a fleet consisting of one coast-defence turret ship, a wooden frigate, a wooden corvette, and four gun-boats with no coal capacity, would be a laughing-stock to the world under the conditions "Colonist" lays down. Even the blissful security of a South American Republic, which he appears to regard with envy, could not be counted upon.

While the illusions under which "Colonist" labours are appalling, it must be confessed that "Globe-trotter," in his views as to the potentiality of the British Navy and its war employment, goes far to justify them. The advantages of naval protection, which—so it seems to be believed—will probably be withdrawn in the event of war, may not unnaturally appear dubious.

It is not much that "Globe-trotter" expects of the Colonies. "They would . . . be open to receive any prizes our fleet might make; they would give shelter, coals, and provisions to the navy; they would serve as hospital depôts for the sick or wounded." This is little more than benevolent neutrality. "In return for this," asks "Colonist," "you would, of course, protect our coasts and ports?"

"*G.*—That would have to be done, in great measure, by yourselves. You see, our fleets would have all their work cut out for them in protecting the coasts of the United Kingdom and the mercantile marine from the enemy's armed cruisers.

"*C.*—Then you mean to imply that you could not spare a sufficient naval force to protect us from the enemy's fleet?

"*G.*—I don't think we could. It would require a very large force to do that. You would have your Australian squadron, of course.

"*C.*—Unless it were very urgently required nearer home?

"*G.*—Precisely so.

"*C.*—Then, my dear sir," etc., etc.

It is to be hoped that the views of "Globe-trotter" are not wide-spread. The work cut out for the British Navy in war is to find out the enemy wherever he may

be, fight him if he will fight, blockade him if he refuses. This is what the Navy has done in the past, and this it is prepared to do again to-day. The peace strength maintained in Australasian waters far exceeds that of any combination of foreign Powers, and is actually greater than is required. Of this strength, seven vessels, forming the fleet to which the Australian Colonies contribute, could not, under any circumstances, be removed without the consent of the Colonial Governments. But according to the only possible principles of naval strategy, naval strength would be developed and maintained where it was needed; and if any withdrawal from the Australian station to waters nearer home took place, it would necessarily imply that the zone of danger had shifted. The enemies of England, however formidable, cannot be in two places at once, and for any hostile Power to develop considerable naval strength in Australasian waters would be extremely difficult, if not altogether impracticable. There is no portion of the British Empire so secure, no waters from which mercantile steamers could start in such safety. Neglecting the Suez Canal route and making straight for the Cape, moderately fast steamers carrying Australasian trade would incur the minimum of war risks. Received at the Cape into the protected zone which the British Navy would establish, the trade of Australasia, in common with that from China and India, would obtain in its onward course the further guardianship, direct and indirect, of the greatest naval Power of the world.

Why is Australasia thus secure in a special sense? "Colonist" has no idea, and "Globe-trotter" is, of course, unable to enlighten him. Both have some dim idea of the advantages of an Australian squadron; neither perceives that it is on other squadrons, maintained by the British tax-payer, that the security of the Colonies mainly depends. No possible enemy has a base in the Antarctic circle. No hostile squadron, no expeditionary force capable of facing the most moderately defended port, can ever reach Australasian waters without trying conclusions with British

fleets, of whose very existence Dr. Bakewell, in common with other Colonial writers, does not appear to be aware. It is on the Channel squadron, the Mediterranean squadron, the Cape squadron, the China squadron, the Indian squadron, that the real security of Australasian coasts and territory depends. The necessary standard of defence of their ports, and the scale of their military preparations, are determined absolutely by distant squadrons to which these Colonies do not contribute a sixpence. Australasia runs no risk whatever of having her "territory invaded," because British ships, thousands of miles from her shores, and all unheeded, guard the only lines of approach in the only possible way. "Fest steht und treu die Wacht am Rhein," sang the Germans in 1870, and the whole nation could realize the idea expressed. As "firm and true" stand ready to-day all over the world the only possible guardians of the British Empire; but "Globe-trotter," "Colonist," and too many people like them, are totally incapable of understanding what naval guardianship means.

So long as the Australasian Colonies are part of the Empire, the whole strength of the great Navy of England, actual and potential, will be put forth to shield their trade and guard their lines of communication with the rest of the world—the only lines by which they can be assailed. Any diminution of our Eastern squadrons will mean, not that the Colonies are to be abandoned, as "Globe-trotter" assumes, but that our enemy is incapable of undertaking distant enterprises, and can be more effectively dealt with nearer home. If that enemy attempts distant enterprises, then can our home squadrons be proportionately reduced, and will promptly follow, as Nelson followed Villeneuve to the West Indies eighty-five years ago, but with the immense advantage of coaling facilities unapproachable by any other Power.

Coming back, therefore, to the "purely commercial basis," what are the military advantages which the Australasian Colonies reap so long as they remain part of the Empire?

1. Their commerce, which is their very life, receives the protection of the greatest naval Power of the world.

2. The necessary standard of the local defences of their ports is reduced to a minimum. They require to be able to resist a cruiser raid, and no more; since no hostile fleet can reach them in force, except on condition of defeating and destroying strong British squadrons.

3. Military establishments, calculated to resist a large expeditionary force, need not be maintained.

4. Rumours of French or German aggression in the Pacific need not involve them in increased military expenditure, and the waste which all scare-measures invariably entail.

5. Difficulties with Japan or China imply work for the Foreign Office at home, and nothing more.

6. The Cape, the first halting-place of their main war trade route, is part of themselves.

7. Protected coaling-stations capable of sheltering their trade stand ready all over the world, without entailing the smallest burden on their finances.

8. At the worst, war insurance rates will only be those which the mother country might have to pay, and would diminish as soon as the naval might of the Empire had gained time for full development. What would be the insurance rates demanded of a South American Republic at war with a great naval Power?

This and more—sentiment, dignity, all the higher attributes of which nations are justly proud, being set aside—are now obtained by the Australasian colonies at a cost ludicrously small in proportion. The four principal harbours of New Zealand are now amply protected, but only because New Zealand is an integral part of the Empire. Victoria has exaggerated her coast defences, and can gain nothing whatever thereby. These colonies have most wisely accepted a share in the maintenance of a special squadron of seven vessels, and no one who examines the bargain fairly can possibly come to the conclusion that it is a bad one from the Colonial business point of view.

No conceivable number of heavy guns or of troops on shore could take the place of these ships.

The programme which Dr. Bakewell lays down will hardly recommend itself to business men who take the trouble to think out the matter. Australasia lives by sea-borne trade alone; and a people thus circumstanced must be able to hold their own on the sea, or contemplate ruin. If the whole external trade of the United States were destroyed, as practically happened in 1812–14, temporary suffering would occur; but ample recuperative power would remain. What would become of the Australasian Colonies under similar conditions? The analogy of the United States, which appears to blind the understanding of some Colonial writers, is false and misleading. Australasia has a splendid future in store for her; but Nature has inexorably ruled that it cannot be that of the Great Republic. If, then, the Australasian Colonies proclaim their independence, as Dr. Bakewell suggests, they must be prepared to create and maintain a strong navy. Has he any clear idea as to the burden this would throw upon the tax-payers, if, indeed, it is even practicable? Money alone will not suffice to create sea power. The United States do not find the maintenance of their naval force an easy matter, and the difficulties would be far greater in Australasia. Let business men calculate the cost, and gauge its certain effect upon the whole economic system of these colonies. But Dr. Bakewell would say that Australasia does not need a navy, for nobody "would care to attack us." The grounds on which this extraordinary notion is based are not stated, and there is no lesson in history more clear than that States wholly dependent on commerce disappear if they neglect to maintain adequate navies. Instead of leaving them alone, other Powers destroy them "on purely commercial principles."

One other fallacy appears to run through the Colonial view, as presented by Dr. Bakewell. It seems to be assumed that Australasia, happy in her remoteness from storm-swept Europe, can stand aloof from the quarrels of

other Powers, and remain placidly untouched by their restless ambitions.

It would not be difficult to show that Australasia, whether independent or not, might be nearly affected by the results of a campaign in Afghanistan. "We don't care a solitary straw about India," says "Colonist," with evident conviction and strangely little understanding. New Caledonia and the New Hebrides have, however, a significance in Colonial eyes, while New Guinea and Samoa might serve to teach a timely lesson. In the event of difficulties with Japan, the new naval Power of the East would be able to dictate terms to independent Australasia. The mere Chinese question would assume an unpleasant aspect for scattered states impotent beyond the little rayon of their harbour defences. Far from attaining the dubious Nirvâna of the South American Republics —usually either in a state of revolution or engaged in fighting each other—independent Australasia would inevitably find herself face to face with strong naval Powers. In such a case, a sorry figure would be presented to the world, and the advantages of the old flag, which "Colonist" so lightly discards, might be realized too late.

We are naturally prouder of our children than they can be of us, and we believe that there is a higher future before the Australasian Colonies than Dr. Bakewell appears to anticipate. The parallel of a South American Republic scarcely seems to satisfy our ambitions for the great offshoots to which we are united by bonds inwoven in many thousands of hearts and homes. We reject emphatically the "purely commercial point of view" in regarding our own kith and kin. There is surely a nobler vision than that which Dr. Bakewell unfolds—the vision of an Empire strong because closely knit, supreme upon the seas, and diffusing throughout the world the gifts of commerce. Such an empire can exist only under the ægis of the flag which Dr. Bakewell is prepared to abandon.

G. S. C.

NAVAL MANŒUVRES AND THEIR LESSONS.*

"IT is on the Navy, under the Good Providence of God, that our Wealth, Prosperity, and Peace depend." In these words, now more than five hundred years old, and still incorporated in the "Articles of War," are set forth the true relations of naval policy to national welfare. They were adopted as the motto of the Naval Exhibition of 1891, and, inscribed over its main entrance, they may have induced many a visitor to reflect on the nature of sea power and its importance to such a country as ours. Many causes have combined to give to reflections of this order a new significance in the last few years. To our forefathers in the last century they were commonplaces. The countrymen and contemporaries of Boscawen and Hawke, of Howe, Jervis, and Duncan, of Nelson, Cornwallis, and Collingwood, never could have forgotten, as their descendants in these latter days have sometimes allowed themselves to forget, what the Navy has done for England, and what it always must do so long as England holds her high place among the nations. Even if all the manhood of the nation were trained to arms, we should perish, if ever the command of the sea, which the Navy secures to us, were to pass into the hands of a Power with which we were at war. By the Navy we exist, therefore, and with the Navy we must stand or fall. This is no hyperbole, no mere flourish of rhetoric, but sober, indisputable fact. It is far more true at the present moment than it ever was

* *Quarterly Review*, April, 1892.

in the last century, that the existence of England as a nation is bound up with the supremacy of our fleets at sea. If our forefathers had been content to live an inglorious and unexpansive existence, they might have dispensed with a Navy, and never have felt the inspiration of its glorious exploits. Down to the close of the last century the population of these islands might in the last resort have subsisted on their internal native resources. Maritime commerce was necessary to its increase, but not necessary to its existence. Its expansion has been so vast that maritime commerce is now necessary to its existence. A powerful Navy, a Navy capable of taking and keeping the command of the sea against all who dispute it, is in the last resort the sole and indispensable defence of a nation which subsists on the fruits of a world-wide commerce, and can subsist by no other means. It may be assumed, we suppose, that a nation which respects and believes in itself, must be prepared to defend itself. We live in a world of human passions and national ambitions. We are not exempt ourselves from the impulses which passion and ambition engender, and the time, when nations can rely on the equity and forbearance of their neighbours for the security of their vital interests, is so far distant as yet that it is practically out of sight. There are only two alternatives, therefore: either we must leave our possessions —including in that term our maritime commerce and its security—undefended, and run the risk of losing them, or we must adopt such measures for their defence as are manifestly sufficient, or at least not palpably insufficient to protect them. There is no middle course in the matter. A Navy which is not strong enough to defend our vital interests in time of need is not worth its cost, however cheap it may be. A Navy which is strong enough to defend us is cheap, whatever its cost may be. To a nation situated as England is situated, the dearest Navy she can have is a weak Navy. The only cheap Navy she can have is a Navy strong enough to defend her.

These considerations are really so elementary that at

the close of the great war in 1815 probably no Englishman of sense could have been found to dispute them. That war established the supremacy of England at sea so completely, that during the long peace which followed men began to forget the efforts and sacrifices by which their naval supremacy had been won, and to ignore both the possibilities and the consequences of a different issue. It is probable that between 1820 and 1850, and even for long afterwards, few men really troubled themselves to reflect upon what was meant by England's holding the command of the sea. The phrase in its strict strategic sense was thoughtlessly confounded with the now abandoned claim long advanced by England to "the sovereignty of the seas." This, says Admiral Colomb in his admirable work on "Naval Warfare," was chiefly a civil claim, not a military one. It is long since England gave up her right to insist that every foreign vessel in the Four Seas should "veil her bonnet," that is, lower her topsails, in the presence of a British man-of-war. The command of the sea in its strategic sense has nothing whatever to do with this very arrogant claim. We now regard the whole of the navigable seas of the world, outside the narrow territorial limits of every sea-board Power, as the common highway of all mankind. In time of peace every flag, which represents a civilized Power and a peaceful purpose, has as much right in every part of the open sea as any other. In this sense England has long ago abandoned "the sovereignty of the seas." In time of peace she claims no more than any other Power, and even in time of war she claims nothing against any neutral flag. It is only against the flag of an enemy that her efforts to secure and maintain the command of the sea have been and must be directed. The command of the sea is, in fact, to England in time of war what the inviolability of its frontier is to a Continental Power. The loss of it is to all intents and purposes what invasion is to a Continental Power. The fear of actual invasion is a pure chimera so long as our fleets are able to protect us.

No writer who has ever tried to conjure with it has been able to make his reasoning even plausible without assuming to begin with that our fleets have either been annihilated or wafted into space—"decoyed away" is the favourite expression based on a perverse misunderstanding of Nelson's pursuit of Villeneuve. On the other hand, the destruction of our fleets would certainly render invasion possible, but would also render it superfluous. An enemy, who knew how to apply the forces at his disposal scientifically and economically, would never dream of invading England, if he could strike a vital blow at her power without risk, and with less cost to himself. War is not an end in itself, and it is now too costly in men and treasure to be prolonged, after victory is secured, for a point of honour, or even for the gratification of national vanity. Its end is peace on terms acceptable to the victor. Let us assume that the fleets of this country have been swept from the seas, and their place taken by the fleets of a victorious enemy. This does not mean that every English ship has been captured or destroyed, but merely that the strategic command of the sea has been wrested from England by her victorious foe—that the fleets of England have been placed in exactly the same strategical position as that in which we must aim at placing the fleets of an enemy if we are to avoid irretrievable disaster. This, and nothing else, is meant by England's loss of the strategic command of the sea. It means that England would be as open to invasion as a continental country would be if its armies had been defeated, and its frontier defences overthrown. But maritime and territorial disaster differ in one important respect. Land invasion only interrupts the internal communications of the districts actually invaded. Outside the lines of the invader, the direct pressure of war is comparatively slightly felt. It is only by striking at the capital, therefore, that the invader can reap the full fruits of the victory he has won.

The same reasoning would apply to the case of England if the British Empire were concentrated in the British

Islands, and if the population of those islands were self-supporting. So far is this from being the case, that without regarding the security of our transmarine possessions, it is easy to show how an enemy who had vanquished our fleets could quickly reduce us to submission without landing a man on our shores. There is always at sea and in transit to or from these shores property belonging to Englishmen which on any given day is worth not less than 200 millions sterling in ships and their cargoes.* An enemy in command of the sea could intercept nearly every shilling of this. The mere pecuniary loss might be borne for a time, perhaps, by a high-spirited nation. But those ships carry either the food which feeds our labourers, the materials which sustain their labour, or the commodities which pay for our supplies. Their disappearance from the sea means therefore the paralysis of our industrial activities. It is not so much actual starvation that we have to fear. There is always food enough in the country to maintain its population for six months or more. But with our mills standing, our forges silent, our furnaces cold, and our mines closed, where is the teeming industrial population of our land to find the wherewithal to buy its food? There is no arguing with an empty belly. The working man is now in the last resort the arbiter of our fate. Can any one doubt that a Government, which resolved to fight on after the command of the sea had passed into the hands of our enemies, would be swept away like chaff before the wind? Matters must never be allowed to come to this pass. Lord Overstone was once asked what would be the effect on the commercial position of England if London were to fall into the hands of a victorious enemy? He could only answer, "It must never be." It never can occur until our sea power is overthrown; but the student of naval warfare must unhesitatingly give the same answer if he is asked what would happen if we lost the command of the sea. It must never be.

* The statistics relative to this matter, and the naval issues affected by them, are examined at length in the next paper, entitled "Navies and Commerce," pp. 92–104.

How is it that our people have ever allowed themselves to forget these things? Why have our statesmen ever been suffered to ignore them? Paradoxical as it may seem, we believe that the beginning of the evil is to be traced to the circumstances of the Crimean war. We have known men of great sagacity and intelligence point to the Crimean war as a convincing proof that the days of naval warfare are over. What did the Navy do for us, they have asked, in the Black Sea or in the Baltic? It could not destroy Cronstadt, and it could not take Sebastopol. The truth is, that in the Crimean war the English and French fleets gave as signal an example of the efficacy of sea power as the world has ever seen. They absolutely neutralized the Russian fleet, and established so complete a command of the sea that not only was the maritime commerce of England and France as unmolested as if we had never been at war, but the two Powers were able to send their armies to the shores of the Black Sea and to transport them to the Crimea without losing a single man in warfare. Except by sea, Russia was absolutely inaccessible either to England or to France. Without the command of the Mediterranean no troops could have reached the Dardanelles, and without the command of the Black Sea no armies could ever have landed, still less been maintained in the Crimea. "Of the absolute command of the sea," says Admiral Colomb, "we have but the single historical instance of our own position in the Crimean war. . . . If there had been in any part of the world a superior Russian naval force, it would have been impossible for success to have attended the expedition to the Crimea." Indeed, so confident were we in the maritime ascendency established by the fleets of England and France, that we omitted the usual, and in all ordinary cases the indispensable, measure of covering the descent of the allied armies upon the Crimea by sending a naval force to mask the Russian men-of-war in the harbour of Sebastopol. On this point Admiral Colomb remarks that "there is no doubt that in disobedience to the strict rules

of naval war, risks were run which were entirely unnecessary. The chief breach of rule was the neglect to mask the Russian ships at Sebastopol by a sufficient force, thereby leaving the crowded transports open to devastation by a determined onset. There is no doubt but that the risk was known and felt at the time; but a general absence of understanding that there always had been, and always would be, rule in these matters, placed the whole of the naval defending force with the transports, rather than in watch upon the only force of the enemy which could interfere with them." Thus the only example afforded by history of a command of the sea so absolute as to paralyze the opposing naval force has actually been so misconceived as to engender the belief that sea power is a thing of nothing worth. Because the chief results of the war in the Crimea were obtained by military force, therefore it is assumed that the Navy contributed nothing. In truth it contributed everything by securing the sole condition on which the invasion of the Crimea was possible. No English or French soldier would ever have set foot in the Crimea if the local sea power of Russia had been even approximately equal to that of her assailants. No English or French soldier would ever have left the Crimea, if the Russian fleets could have recovered the command of the Black Sea.

Turn where we will in the history of the British Empire, we find that it rests solely upon sea power. It was sea power that defeated the Armada. It was sea power that gave us the victory in our long struggle with the Dutch. It was sea power that gave us our Colonies and our commerce. It was sea power that sustained the policy of the elder Pitt, and induced the citizens of London to declare that under his rule they found commerce united with and made to flourish by war. It was sea power that set bounds to the ambitions of Napoleon, and sea power alone can save England if ever she is again in conflict with an enemy capable of disputing her position at sea. The integrity of the British Empire can only be seriously

menaced by a Power which can vanquish us at sea. The United Kingdom cannot be invaded unless our sea power is first annihilated. If the matter be rightly considered, the defence, not merely of our own shores but of all our transmarine possessions, is an affair not of local fortifications and forces, but of naval strategy in waters surrounding the territories of the great maritime Powers. Napoleon said, paradoxically enough, that he would conquer India on the banks of the Vistula. It is no paradox to say that Australasia must be defended, not in the southern ocean, but in the seas which wash the arsenals of such maritime Powers as may think themselves strong enough to try conclusions with the British Fleet.

If the foregoing considerations be even approximately sound, it follows that the neglect of her Navy by England would mean the loss of her position among the nations. In a certain sense, perhaps, there is no ground for fearing such neglect. Parliament votes money readily for the maintenance of our fleets, and our naval traditions are still so strong that the tax-payer bears the burden without complaint, though with no very intelligent appreciation of what he is paying for. This is, perhaps, almost inevitable. No man of education would care to avow his total ignorance of the broad principles of military strategy. In the domain of naval strategy, on the other hand, not only is such ignorance no reproach, but the mere proposition that naval strategy has its broad and indefeasible principles appears to be regarded in many quarters as the crotchet of a few enthusiasts. We shall soon discover the errors of this if we are ever at war again with a great maritime Power; in the meanwhile, however, the purpose of these pages will be fully accomplished, if they induce some of our countrymen to regard the affairs of the Navy with that measure of intelligent curiosity which no man of sense and education withholds from the consideration of military affairs.

For this purpose very little technical knowledge is really needed. What is required is an intelligent grasp of the conditions which make for sea power, and the principles

which govern naval operations. The essential problem of naval strategy is the same to-day as when Greece overthrew the great King at Salamis, when Sparta shattered for a time the Athenian power at Syracuse, when Rome broke the power of Carthage in the Mediterranean, when England successively vanquished Spain, Holland, and France at sea. Strategy aims at concentrating a preponderant force at such critical points that defeat at such points compels the defeated adversary either to abandon his campaign, or, if the reverse is sufficiently decisive, to sue for peace. Tactics occupy a narrower sphere within the domain of strategy, and consist chiefly of the evolutions best adapted either to bring an enemy to action or to elude and parry an attack made in superior force. It follows that the domain of strategy is far less affected than that of tactics by such changes in the methods and instruments of naval warfare as we have witnessed in these latter days. The methods of strategy may change, but its principles remain immutable. With tactics the case is widely different. The history of military tactics is the history of the weapons successively employed. A similar evolution may be traced in naval tactics. When the propelling power was the oar and the weapon of offence was the ram, the normal order of battle was necessarily the line abreast. When sails took the place of oars and artillery superseded the ram, so that the principal weapon of offence was removed from the stem of the ship to its side, the normal order of battle became by parity of necessity the line ahead. Steam has now superseded sails, the ram has been revived, the power, range, and accuracy of artillery have all been immeasurably increased, while at the same time the capacity of a ship to resist its effects has been very considerably, though certainly not proportionally increased, and an entirely new weapon, terribly destructive within certain well-defined limits, and invested with moral terrors probably far in excess of its real offensive capacity, has been added to the naval armoury in the shape of the so-called "automobile" torpedo. The effect of all this is

that, if a Rodney or a Nelson were required to take command of a modern fleet in time of war, he would indeed find the broad principles of naval strategy still unchanged, he would still strive to concentrate a preponderant force on points determined to be critical by the same broad principles as those which determined the critical points a hundred years ago; but his actual methods, both of strategy and of tactics, would be based, not as then on the power of sails and the range of unrifled guns, but on steam, speed, and coal endurance, on the respective powers of the gun and the armour-plate, in the last resort on the torpedo and the ram.

In default of actual experience in war no better illustration can be found of the relation between naval policy and the true principles of naval warfare than in the history of those "naval manœuvres," which for the last few years have during each summer attracted the attention of at least a portion of the public to practical naval questions, and encouraged the public discussion of the leading problems involved in them. It is not for the purpose of solving strategic problems in the abstract that naval manœuvres have been instituted. They throw and can throw very little light on the broad principles of naval strategy, which are to be deduced from history, and are really determined by the very nature of things. But strategic methods, as distinct from strategic principles, are subject to constant change. For instance, the substitution of steam for sails enables a naval commander to determine precisely the number of hours required to transport his fleet from any one point to another. He can also determine with corresponding exactitude the limits of his adversary's movements in any given direction, and, supposing him to be acquainted with the latter's objective, in the direction determined thereby. It follows that the measures which a modern commander would take for securing his strategic object are governed by conditions much more precise and definite than those of his predecessors could have been—the uncertain and indeterminate factor

of the weather having now been to a very considerable extent eliminated. It might therefore be argued with some show of plausibility that naval strategy had been reduced to a question of calculation, that its main problems could be as satisfactorily solved at a desk in the Admiralty, with charts for the field of operations, and pins for the fleets and ships employed, as by the more costly and troublesome method of sending the ships to sea. That is not so, and a very little consideration will explain why it is not so. Because some elements of uncertainty have been eliminated, it does not follow that all have disappeared or that new elements of a like character have not been introduced. War is an affair of men, not of machines. The human element cannot be eliminated, the personal equation cannot be neglected. The method of calculation involves the assumption not only that all the elements are determinate, but that all the factors behave exactly as they ought to do, that the fleet at sea is as efficient, as mobile, as free from all misadventure and mishap as the fleet on paper is assumed to be. The only way to obtain an approximation between the behaviour of the actual fleet and that of the ideal fleet is by practice and experiment. A military strategist might argue *à priori* that such and such a battalion or brigade ought to be at such a point at such and such a time. They would certainly not be there if they had not previously been trained in the exercises required to give them the necessary efficiency, mobility, and endurance. The case of ships and fleets is similar. They are not automata. They are highly organized human machines. Hence ships and their crews require to be trained, assiduously and laboriously, not merely in the ordinary routine of drill, some of which can now be continuously and economically conducted on shore, but in the higher discipline of fleet evolutions and strategic movements. It is impossible to keep them always at sea. The cost would be prohibitive. In the old sailing days the cost of keeping a ship at sea was not much greater, except for the wear and tear of ropes and

sails, masts and spars, than that of maintaining her in a state of efficiency in harbour. Her crew would have to be maintained in any case. It is very different nowadays. A ship at sea burns coal, and coal is a costly commodity. Its cost amounted to £40,000 during the manœuvres of 1890. In time of peace, therefore, we now require a policy of smaller fleets and larger reserves, but reserves ready for immediate service. Readiness for immediate service involves the necessity of frequent practice,—practice in mobilization, and practice in exercises at sea. Periodical naval manœuvres are thus, as the practice of all naval Powers of the first rank has shown, an indispensable condition of naval efficiency; our ships might be as good and as numerous as ever, and our seamen might be as full as ever of the traditional spirit of the British sailor, but if periodical exercises on a large scale at sea were now to be neglected we should fall back to the position of having what a former First Lord of the Admiralty once allowed himself to describe as little better than dummy ships and a fleet on paper.

Even so, it might be argued, the necessity of evolutionary exercises is established, but the advantage of strategic manœuvres is not demonstrated. The truth is that the two are practically inseparable; and even if they were not, it is manifestly desirable to combine them. Strategic manœuvres do not interfere, in any disadvantageous sense, with evolutionary exercises, nor with the ordinary routine of a man-of-war at sea. In point of fact, they are for the higher ranks of the service, for the officers in command of ships and the admirals in command of fleets, exactly analogous to the training which evolutionary exercises and man-of-war routine provide for the lower ranks of the service. The hierarchy is continuous and complete: routine for the rank and file, evolutionary exercises for commanders of ships and officers of the watch, strategic manœuvres for commanders of fleets, and, in a subordinate sense, for commanders of ships employed on detached service. The routine is never intermitted, though it may

on occasion be modified in detail to suit the exigencies of an assumed state of warfare. A period of evolutionary exercises, with no determinate strategic purpose, has always in the practice of recent years preceded the period of strategic manœuvres proper. But the training of our fleets would manifestly be incomplete if the strategic element were neglected. However strongly we may insist that the broad principles of naval strategy are based upon history and the nature of things, and are therefore unaffected by changes in the methods and instruments of warfare, it would be absurd not to acknowledge that there are many strategic problems only to be solved by actual experiment, many questions concerning the best mode of handling modern warships which can only be determined by direct experience and intelligent observation.

We may assume, then, that periodical manœuvres on a large scale, and mainly strategic in character, are necessary to the efficiency of the naval service in the conditions of modern naval warfare, and therefore necessary to the security of a nation which depends and must depend upon sea power. They have, besides, other advantages, not to be overlooked. They put the Navy in evidence before the eyes of the nation. For our forefathers in the last century the stern experience of warfare did this. The countrymen of Nelson knew what they owed to the Navy and what the Navy did for them. In the generation which has followed the period of the Crimean War the public attention has, to a very large extent, been withdrawn from the naval problem and concentrated on the military problem. Because the nations of Europe have been converted into an assemblage of armed camps, and because four great European wars have determined the destinies of more than as many nations in the last quarter of a century, our countrymen have been led to suppose that their own national security is an affair of armies rather than of navies. We have lost that instinctive sense of dependence upon the Navy, with which our forefathers were endowed, by the stern but glorious teaching of

successful war. The higher policy of defence has been given over to the military arm, and though our military administration is notoriously inefficient and incapable, albeit the most costly in the world, it is the War Office, rather than the Admiralty, that is generally assumed to be primarily responsible for the national security. The assumption would do no great harm if it were not countenanced by policy. It would very quickly be set aside if we were at war with a great European Power, not merely because the nature of things requires us to defend ourselves and attack our enemies at sea, but because our military administration would almost certainly break down more hopelessly and more disastrously than it did in the Crimean War within a few weeks of the outbreak of hostilities.* Nevertheless, the impression is general that the army is our trusty sword and buckler. It is nothing of the kind. It is rather the auxiliary of the Navy, the necessary garrison of an Empire whose main defence is on the sea.† Any attempt to make it more than this is a misconception of the problem of national defence, and a wasteful expenditure on superfluous defences of resources that are so far withdrawn from the legitimate requirements of the Navy.

It is worth while to pause for a moment at this point, and to consider one or two simple but conclusive proofs of the justice of this view of the matter. The deplorable expenditure at Portsmouth and elsewhere on elaborate defensive works, which were never necessary, and are now, in many cases, obsolete, is a standing and indefeasible proof. But the proof may be generalized as follows. Defence, whether naval or military, may be either active or passive. If we blockade an enemy's fleet in his ports,

* These are strong words, but, at the time they were written, they were more than justified, by the reports of commissions and committees innumerable, and by the opinion of every military man who cared for the welfare of the British army. There is reason to hope that they are now in some respects out of date.

† The case of India, which in many respects stands apart, is no real exception to this proposition. We could not land a corporal's guard in India if our sea power were overthrown.

and await its issue in order that we may bring it to action; if we pursue his cruisers from sea to sea, and never quit the scent until they are hunted down; if we take care that his raiders on our coasts are never left unmolested long enough to enable them to effect their object; in a word, if we require our Navy, fleets and single ships alike, to do its best to take, burn, sink, or destroy the fleets and ships of the enemy wherever they are found, that is an active defence. A passive defence is one which awaits the attack of the enemy under conditions, either temporary or permanent, most favourable to the defending force, though often inconsistent with a vigorous offensive. It is hardly necessary to point out that the active defence is incomparably the more effective, though its failure is sometimes more disastrous and more overwhelming in its ulterior results than that of the passive defence. Each has its province, but the maritime position of this country imposes on it the absolute necessity of making its defence entirely an active one. How far is this principle recognized in the policy of our military authorities? The following table will show. It is taken from "The Statesman's Year Book" for 1891, and exhibits the relative strength of the several branches of our military forces maintained for service in the United Kingdom at different periods of the present century:—

Year.	Cavalry.	Artillery.	Engineers.	Infantry and Special Corps.	Total.
1800	14,003	6,935	421	49.386	70,745
1810	20,405	16,814	974	74,325	112,518
1820	9,900	4,046	371	46,799	61,116
1830	8,036	4,037	682	35,339	48,094
1840	7.190	4,118	544	38,624	50,476
1850	8,108	7.353	1,201	50,415	67,077
1860	11,389	14,045	1,707	62,366	89,507
1870	10,910	14,469	2,890	56,092	84,361
1880	12,672	18,075	5,132	69,577	105,546
1890	12,470	17,584	5,370	68,682	104,116

The significance of this table for our purpose resides in the column headed "Engineers"—that is, the branch of the service to which the provision and control of the means of passive defence have been, for the most part, entrusted. Other things being equal, if we find the engineering branch of the army increasing out of all proportion to the other branches, we may regard it as so far an indication of a growing disposition on the part of our military authorities to rely upon passive defence. Now what are the facts? In 1800 we had an army of 70,745 men in all, and of these only 421 were engineers. The battle of Trafalgar had not been fought, fears of invasion were beginning to be rife, and if ever a passive defence of our coasts was necessary, it must have been then. Yet its requirements were held to be satisfied by a mere handful of engineers. In 1810, when the Peninsular campaigns had begun, the strength of the army had risen to 112,518, yet the number of engineers was still under 1000, though their services in the Peninsula were incessant and multifarious. We need not examine the whole table in detail. The abnormal growth of the engineer branch in these latter days is sufficiently palpable on the face of it. A large allowance must be made of course for the immense development in modern times of those scientific branches of the military art which appertain specially to the profession of an engineer. But no allowance, however liberal, will account for the figures in the table. In 1850 the complement of engineers had increased to 1201, though the numbers of the army were lower by some 3000 than in 1800, when 421 engineers were considered sufficient for all the requirements of national defence. In 1860 we trace the influence of the Crimean War. The army had increased to 89,507 and the engineers to 1707. In 1870 the army was reduced again to 84,361, but the number of engineers had mounted to 2890. In 1880 we had no less than 5132 engineers out of an army total of 105,456; and in 1890, though the army total had fallen to 104,116, less by 8000 than its total complement in 1810, the number of engineers had

again increased to 5370, more than five times as many as were required by the nation when Wellington was beginning his Peninsular campaigns. The meaning of these figures is simply this—that by overlooking the requirements as well as the advantages of active defence, our military authorities have been induced to lay enormous and most disproportionate stress on the requirements of passive defence. Passive defence is the resource of a weak naval Power. For a Power like England, which must hold the command of the sea or perish, it is to a very large extent superfluous, and so far as it is superfluous it is mischievous, because it diverts from the Navy resources which properly belong to it. How can we have a Navy strong enough for our needs if our military authorities are allowed to spend millions on defences which logically involve the assumption that the Navy has ceased to exist? These defences are superfluous so long as the Navy can defend us, and quite useless if the Navy is destroyed. A Power which had overthrown our Navy would easily reduce us to submission without wasting an ounce of powder in the reduction of our coast defences.

Such are the costly results of an inadequate grasp of the higher policy of defence—such the disastrous consequences of ignoring the true relation of the Navy to the problem of national security. It is no slight matter then that the public mind has been directed of late years by a series of object-lessons of the utmost importance and value to a reconsideration of the relative importance, in the special circumstances of the British Empire, of the military and naval problems respectively. Englishmen who think at all on the subject can no longer permit themselves to think that the primary function of the British Navy is to keep the police of the seas. They know, or they ought to know by this time, that every fleet and squadron that England keeps abroad is a definite strategic element in a comprehensive scheme of Imperial defence, and they know also, or ought to know, that the reserves, which we annually mobilize and send to sea in

home waters, have successively thrown light on some of the main problems of naval strategy and tactics as affected by modern conditions of warfare. We will now briefly examine the history of the manœuvres from this particular point of view. Each annual series would properly demand a whole essay to itself; but a comprehensive view is not impossible, and may, we trust, be made instructive as well as interesting.

The manœuvres began in 1885 in an almost accidental manner. Our relations with Russia had been strained almost to breaking point by what was known at the time as the "Penjdeh incident," and for some weeks war seemed imminent. Naval dispositions for the defence of our interests were quietly made in all parts of the world, and a powerful but heterogeneous fleet was hastily mobilized in home waters. The cloud of war happily passed away, however; and the only permanent consequence of its gathering was the inauguration of that system of periodical manœuvres which has now, it may be hoped, become a permanent feature in the policy of the Admiralty. Sir Geoffrey Hornby, by the universal consent of the naval service the first tactician of his day, was placed in command of the fleet mobilized at home, and was sent to sea with instructions to carry out a series of manœuvres. At Bantry Bay, which Admiral Hornby made his headquarters at the beginning of the operations, a very instructive series of experiments was carried out in the defence of a protected anchorage against the attack of torpedo boats and other vessels more or less appropriate to such a purpose; and in particular the total destruction by the *Polyphemus* without the slightest injury to herself, of a very powerful boom stretched across one of the entrances to the anchorage of Berehaven, afforded something like a decisive test of the efficacy of such means of defence. At a subsequent period of the manœuvres Admiral Hornby, starting from Blacksod Bay with a portion of the fleet, endeavoured to elude the vigilance of Rear-Admiral Whyte, his second in command, who with the remainder of the fleet was to establish his

base at Lough Swilly, and to endeavour to prevent an attack of Admiral Hornby either on Greenock or on Belfast. By a brilliant and daring act of seamanship Hornby quitted Blacksod Bay after nightfall in the teeth of a strong gale, and endeavoured so to manœuvre as to elude his adversary, and to secure a free passage through the North Channel. But among the ships taken up by the Admiralty when war seemed imminent was that swift but ill-fated Atlantic liner the *Oregon*, and this vessel, commanded by naval officers, was attached to Whyte's squadron. She was so handled as to take full advantage of her exceptional speed, and while keeping touch with the attacking fleet she managed to maintain her communications with Whyte without disclosing her purpose to Hornby. The result was that although Hornby was able to pass the North Channel unmolested, yet he was immediately made aware of the unexpected presence of Whyte's squadron at his heels; while, but for a failure of speed in some of his ships, which retarded the movements of his fleet, Whyte, who had throughout been informed of his enemy's movements, would have been in a position to frustrate the latter completely. In no subsequent manœuvres, so far as we are aware, has the importance of fast cruisers acting as scouts, and the direct bearing of their operations, when skilfully conducted, on the whole conduct and issue of a campaign, been more conclusively demonstrated.

In 1886 there were no manœuvres proper, though the torpedo operations of Bantry Bay in 1885 were repeated at Milford Haven in a form modified by the experience previously acquired. In 1887 a very large and powerful, though somewhat miscellaneous fleet, was collected at Spithead in celebration of the Queen's Jubilee. This great fleet was subsequently employed in three separate series of manœuvres, only two of which need engage our attention here, the third being similar in principle to the operations carried out by Admiral Hornby in 1885. The two principal series were conducted respectively

by the late Admiral Hewett against Admiral Fremantle, and by Admiral Baird against Admiral Fitzroy. In the former, Hewett operated in defence of the Channel and the mouth of the Thames, while his opponent advancing from the westward was to endeavour to elude the defending fleet, and having done so to occupy the approaches to the Thames. A similar plan of operations, having either Liverpool, Glasgow, or Belfast, for its main objective, was proposed for the attacking squadron of Fitzroy, while Baird, in command of the defending squadron, was to give the best account he could of the squadron of his assailant. In the Channel, Fremantle, advancing from the westward, managed so far to elude his adversary's vigilance as to give his scouts the go-by and to reach the mouth of the Thames in advance of him. But here his advantage, such as it was, proved his undoing. He was destined to afford a capital illustration of the strategic maxim that a serious territorial attack from the sea is so hazardous as to be virtually impracticable, so long as a defending force, not necessarily superior to the assailant, but capable of meeting the latter on something like equal terms, is in the neighbourhood and undefeated. Had Hewett been better supplied with scouts in the shape of a sufficiency of fast cruisers, had his intelligence service on shore and afloat been organized as such a service must be organized in the case of actual war, and as indeed it has been organized in the manœuvres of subsequent years, or even in default of these conditions, had he, with the slender scouting resources at his command, been a little more fortunate in establishing touch with his enemy at an earlier stage of the proceedings, it is probable that Fremantle would never have been able to reach the Thames at all. Some few brilliant exploits in the way of gathering and conveying intelligence were performed by the cruisers employed, but those were the days before the new naval programme, and the supply of cruisers and scouts was deplorably insufficient. Hence Fremantle was enabled to reach his supposed objective without encountering

his adversary. But his apparent success was no real advantage from a strategic point of view. Hewett, though unable to bar his opponent's passage, was close upon his heels, and the invader was practically caught by a superior force in a position among the shoals at the mouth of the Thames so disadvantageous that he was compelled, in order to save his fleet from capture according to the rules, to retreat precipitately into the North Sea by one channel while Hewett entered the Thames by another.

The lack of cruisers and its consequence in the failure of intelligence on the one hand, and on the other a fresh and signal illustration of a strategic principle as old as naval warfare, were thus the two salient lessons of this branch of the manœuvres of 1887. It may be urged, perhaps, that a principle as old as naval warfare needs no fresh illustration. To such an argument two replies may be made. In the first place, the principle in question has often been overlooked. It was the basis of the masterly strategy proposed by Torrington before the battle of Beachy Head, as well as of his tactics in the course of the battle. Admiral Colomb has shown quite conclusively, as it seems to us, that if Torrington's plan of operations had not been overruled by his superiors in London, the battle of Beachy Head need never have been fought and lost, while, if it had been fought on any other principles than those which still governed Torrington's proceedings, it might have resulted in the overthrow of William's throne and the restoration of the Stuart dynasty.* In the second place, it is presumable either that Fremantle himself thought it a practicable operation of naval warfare to strike at the enemy's vital point, while leaving a superior "fleet in being," to borrow Torrington's own phrase, in his immediate rear, or that his superiors at the Admiralty were of that opinion, and gave him

* The historical and strategic questions here involved are discussed at length in a subsequent paper entitled "The Command of the Sea," p. 118.

instructions accordingly. In either case an established but forgotten principle was violated, while its truth and bearing were abundantly illustrated in the result.

It might almost be thought, indeed, as if the framers of the plan of manœuvres of 1887 must have had in mind the strategic situation which existed at the time of the battle of Beachy Head. It is true that his fleet was inferior to that of his adversary, but in other respects Fremantle might be supposed to represent Tourville: and what Tourville neglected to do, or perhaps was not strong enough to do, namely, to strike at the communications of William, who was at the time in Ireland about to fight the battle of the Boyne, the Admiralty resolved to do by sending a hostile fleet into St. George's Channel. But they exposed this fleet to the risks Tourville would have run had he detached a squadron against William's communications. While Torrington held the Channel and succeeded in frustrating Tourville's advance, though he could not fight a decisive battle with any chance of success, Killigrew was making his way from the coast of Spain, and Sir Cloudesley Shovel held St. George's Channel with a small but sufficient force. In the manœuvres of 1887 Baird may be considered to have been entrusted with the task which would have fallen to Killigrew and Shovel had Tourville attempted to threaten St. George's Channel. Fitzroy was allowed to enter the Channel, but not without having been observed by his adversary. A hostile squadron so situated must sooner or later try conclusions with its enemy. There is no escape for it, except by returning as it came and fighting its way out, or by making its way to the northward. In either case, or indeed in any case, it must abandon its objective. So long as the defensive squadron is "in being" and intact, no serious attacks can be made on the coasts, "for," as Torrington wrote, "whilst we observe the French they cannot make any attempt on ships or shore without running a great hazard;" so that an enterprising commander could wish for nothing better than that his enemy should

place himself in the position in which Fitzroy was placed by the Admiralty. As a matter of fact, he was observed, overtaken, and defeated by Baird. It is true that he was hampered by the failure of some of his ships in speed. But the utmost that he could hope to do in any case was to hurry through St. George's Channel at full speed with an enemy superior in force at his heels, and to trust to luck to enable him to force the North Channel and escape into the open sea. With a superior fleet "in being" behind him, any attempt to attack the coasts would have led to certain destruction.

The main feature of the manœuvres of 1888 was an experiment in blockade under the conditions of modern naval warfare. For the purpose of this experiment it was assumed that war was imminent between two naval Powers, one, the weaker, represented by Ireland, the other by Great Britain. The enemy was fitting out two fleets in Bantry Bay and Lough Swilly respectively, and two British fleets, with their bases at Milford Haven and Lamlash, were organized for the purpose of blockading him in his ports. Each blockading fleet was superior in strength to the fleet blockaded by it, but the two hostile fleets together were stronger than either of the blockading fleets, and they had the advantage of being in immediate telegraphic communication across Ireland, while the blockading fleets could only communicate directly by means of cruisers sent from one to the other, or indirectly by messages sent to some British port and thence telegraphed to the nearest port in communication with the British commanders at sea. Sir George Tryon at Berehaven was in command of the hostile fleets, with Admiral Fitzroy as his second in command at Lough Swilly, while Admiral Baird commanded the two blockading squadrons, and undertook the blockade of Bantry Bay, with Admiral Rowley as his second in command off Lough Swilly. For several days the blockade was maintained with apparent success at both places, the tactics adopted consisting of an inshore squadron closely watching the enemy's port with an advance guard of torpedo-boats

and torpedo gun-boats, while a cordon of battle-ships patrolled the outer waters within signalling distance of the inshore squadron. It was made known subsequently, however, that Tryon had been instructed by the Admiralty to make no attempt at breaking the blockade before a certain day, in order that it might be ascertained how far the officers of the blockading squadron could bear the strain imposed upon them by the necessity for incessant vigilance. In the old days of sailing ships an Admiral in command of a blockading squadron knew that, so long as the wind remained in a certain quarter, the enemy could make no attempt to escape, and therefore the vigilance of the blockade might so far be relaxed in those circumstances. But with steam the conditions are totally changed, and a blockade once established must be continuously maintained without even a moment's relaxation of vigilance. The strain imposed upon those concerned in it is thus incessant, and can only be rendered even tolerable by the frequent relief of the ships engaged. In other words, a continuous blockade, if possible at all in modern conditions, necessarily requires that the blockading squadron should be so numerous as to be able frequently to detach some of its ships for the purpose of affording them necessary relief while still maintaining the required superiority over the ships of the enemy.

There are, indeed, some who think that a close blockade of an enemy's squadron is no longer possible. What is certain is that, before the period of inactivity imposed by the Admiralty on the hostile fleets in 1888 had expired, Rowley had written to Baird to say that his officers and men were so exhausted that he would be compelled to raise the blockade, and though no such specific conclusion had been reached by Baird himself, it may perhaps be assumed that the breaking strain which had been reached by one fleet was not far distant in the other. This proves, however, not that blockades are impossible, but that the methods of blockade adopted in 1888 must be modified in accordance with the experience thus gained. The

purpose of a naval as distinct from a commercial blockade is, as Admiral Colomb has well pointed out, not so to seal up the blockaded port as to prevent all ingress and egress, but to secure that the enemy's fleet shall not put to sea without the commander of the blockading fleet immediately becoming aware of his movements. It is not essential to this purpose that the main body of the blockading fleet should always be close at hand; it is necessary that its position should be so favourable, and its communications so effective, that the enemy, if he attempts to escape, shall not be able to get away without being observed and pursued, nor to establish himself in a position nearer to his presumed objective than that occupied by the blockading squadron. Probably these conditions would best be satisfied by keeping the main force of the blockaders at a convenient distance, where coal and other supplies are accessible, and closely watching the enemy's port with a flotilla of torpedo gunboats of light draft and exceeding swiftness, and sufficiently numerous to admit of frequent relief. It is of course absolutely essential that the communications between such an inshore squadron and the main squadron at a distance should be immediate and practically unassailed by the enemy. Where these conditions are possible, blockade is still possible, and perhaps not otherwise.

It is certain at any rate that the blockade of Bantry Bay and Lough Swilly was a complete failure. It was full of instructive lessons, and of dramatic episodes which abundantly displayed the dash and daring of the British naval officer, but it proved to demonstration that the means at Baird's disposal were, as applied by him, totally inadequate for the purpose aimed at. In the period of inactivity imposed upon him by the Admiralty, Tryon matured his plans with consummate skill, and as soon as he recovered his freedom of action he carried them out without let or hindrance. Three ships escaped from Bantry Bay almost unobserved by the blockading squadron and joined two other ships, which escaped from Lough Swilly, at a predetermined

rendezvous, whence they proceeded to raid upon the north-east coast of Great Britain. The escape from Berehaven was effected in the night under cover of a brilliant diversion carried out by Tryon, who remained at Bantry Bay, while Fitzroy himself escaped in his flagship from Lough Swilly and took command of the raiding squadron. At daybreak on the following morning the blockade of Bantry Bay was raised. Baird had ascertained that some ships had escaped, though he was not able to pursue them, or to divine their precise purpose, and the presumption being that if they appeared off Lough Swilly they would give Fitzroy the required superiority over his immediate adversary, it became necessary to raise both blockades and to effect a junction with all despatch between the two blockading squadrons. Accordingly, a fast cruiser, the *Mersey*, having been despatched by the shortest route round the west coast of Ireland to warn Rowley of his danger and appoint a rendezvous with his commander-in-chief, the fastest battle-ships of Baird's squadron were sent on in advance through St. George's Channel to reinforce Rowley, while Baird himself proceeded as rapidly as he could to a rendezvous in Luce Bay. It was necessary in the first instance to save the two fleets from destruction in detail, and this could be done if the *Mersey* joined Rowley in time to redress the balance at Lough Swilly, and to direct Rowley to fall back in the direction of the fast and powerful squadron advancing through St. George's Channel to reinforce him. The junction of the fleets was effected, but for practical purposes Tryon still remained master of the situation. Recognizing that the force at his disposal did not enable him to afford adequate protection to the northern ports, and that a victorious enemy would have the approaches to London at his mercy if the only "fleet in being" could be induced to leave them uncovered, Baird withdrew as rapidly as he could to the Channel, leaving Rowley to cover Liverpool for a time. Tryon, finding the blockade raised at both points, united the residue of his two squadrons and proceeded to the reduction

of Liverpool, Baird having in the meanwhile directed Rowley to follow him up the Channel. It may very reasonably be held that Baird's resolve to concentrate his whole force in the neighbourhood of the Downs, though justified perhaps by the circumstances of the time, was not in itself a very sound piece of strategy. Its justification must be sought in the circumstance that in 1888 no organized system was in force for collecting intelligence along the coasts and transmitting it without delay to the British commander at sea. In default of such a system, Baird, having once lost touch of his enemy, was compelled to assume that the latter would not again be heard of until he was in the near neighbourhood of his objective, wherever that might be; and, assuming his objective to be the Thames, Baird held it to be his duty to neglect all other parts of the Kingdom and to cover the Thames at all hazards. On the principle, however, that a vigorous offensive is always hazardous and generally hopeless, so long as there is a sufficient "fleet in being" undefeated and within striking distance, it may well be held that, with a better organized system of intelligence, Baird might so have disposed his forces as to afford adequate security to the Thames without leaving Liverpool unprotected. As a matter of fact, an occupation of the mouth of the Thames never entered into Tryon's scheme of operations. He contented himself with the reduction of Liverpool and with certain raids, more theatrical than really effective, questionable in strategy, but fairly in accordance with the rules laid down by the Admiralty, on the north-eastern coasts of Great Britain.

The two broad lessons of the manœuvres of 1888 were thus, first, that in modern conditions a blockade to be effective must be conducted by a much larger force in proportion to the blockaded fleet than was thought necessary when the scheme of operations was laid down, and that its method must be radically different from that adopted under the same scheme; and second, that an organized system of coast observation and intelligence is

absolutely necessary to a defending fleet, if it is to secure the full advantages of that superiority of force which is England's prerogative on the sea, and that mobility which the use of steam has conferred on modern fleets and warships. In the sailing days a "fleet in being" at Plymouth, for example, could afford no protection to the Thames against an attack on its approaches by a fleet coming from the North Sea, if easterly winds were prevailing; but in modern conditions a commander at Plymouth, well served by swift cruisers certain of establishing instant communication with him as soon as they came within signalling distance of any one of a sufficient number of observing stations established on all parts of the coast, might fairly reckon on receiving intelligence of his enemy's movements in time to enable him to frustrate his object. It is true that he could not expect to be able to prevent what may be called fugitive raids made by detached cruisers on defenceless coast-towns at a distance from his base; but attacks of this kind are far less formidable in reality than they are generally made to appear in the mimic warfare of manœuvres. They are full of hazard to the attacking force, and in any case they are of little moment in deciding the broad issues of a campaign. We shall see presently to what hazards they are exposed, and by what measures they can be frustrated so long as the defending force retains its superiority at sea—a condition belonging to their essence, because where it is absent a hostile fleet will not waste its time and strength in such enterprises, but will go straight to its main point and objective.

These two lessons were not lost on the framers of the scheme of manœuvres of 1889. Again, certain ports in Ireland, Berehaven, and Queenstown, were assumed to be the bases of two divisions of the naval force of a Power supposed to be hostile to Great Britain, and again a superior British fleet was entrusted with the task of defending the coasts of Great Britain against maritime attack. Sir George Tryon was this time in command of the British

fleet, while Admiral Baird became in his turn the enemy. The scheme of operations did not contemplate a close blockade as in the previous year; but Tryon, with his base at Milford Haven and auxiliary squadrons at Lamlash, Devonport, Portland and the Downs, was required to keep a close watch upon the enemy's movements by means of his cruisers, and while leaving him free to take the sea, so to dispose of his own force as to be able to deny the assailant access to the British coasts and waters. Baird's position was a very difficult one. He was inferior in strength to his opponent, and could not therefore try direct conclusions with him. To force his adversary's guard without fighting an action was therefore almost the only course open to him, and the alternatives presented themselves of either repeating his adversary's strategy of the previous year and making a descent on the north-east coast, or attempting to pass the Channel with a view to attacking the Thames. As might naturally be expected, he chose the latter. Selecting the fastest battleships and cruisers from his two divisions, he combined them in a raiding squadron under Admiral D'Arcy-Irvine. They were to attempt to enter the Channel separately on predetermined courses, and to make for an appointed rendezvous in the neighbourhood of Beachy Head. It was hoped that by passing points of special danger in the night, most if not all of the ships engaged in this hazardous enterprise might be able to elude the vigilance of the defending fleet. If they could once get well ahead of Tryon's main squadron they were swift enough to escape individually from any other ships likely to dispute their passage, and strong enough when combined to overpower the squadron placed in the Downs for the purpose of covering the Thames. Even if closely pursued therefore they would be able to escape into the North Sea, though the contemplated attack on the Thames might be frustrated. Everything depended, however, on the ships of the raiding squadron being able to make good their entrance into the Channel without encountering the main force of the

defending fleet. Unfortunately for the success of the enterprise the primary condition, that of getting past Tryon's main squadron unobserved, was not realized. From Falmouth to the neighbourhood of Ushant, Tryon's fleet was spread out in such order as to cover the whole ground without placing the individual ships so far apart as to be unable to communicate with and support each other. Here the several ships composing Baird's raiding squadron were successively encountered. Three were overpowered and captured; the remainder, including the flagship of D'Arcy-Irvine, made good their escape, having encountered only the slower battleships of Tryon's squadron, and returned to Baird's headquarters at Queenstown, where Baird found them on his own return with his slow battleships from a cruise into the Atlantic, undertaken for the purpose of concealing his whereabouts from his adversary. Thus the enterprise totally failed and ended in crushing disaster—a bitter disappointment, no doubt, to Baird, but on the whole a satisfactory demonstration of the exceeding difficulty which a hostile force would always encounter in any attempt to enter the Channel and carry on a vigorous offensive in the face of a superior "fleet in being," skilfully disposed with due regard to the strategic conditions of the case. Baird's plan failed utterly; and though it would perhaps be too much to say that it deserved to fail, yet it is true that its failure was a better illustration of sound strategic principle than its success could possibly have been. The raiding squadron might, if it had been as lucky as it was unlucky, have managed to get through the Channel and out into the North Sea; but with a superior fleet behind it, it could never have undertaken any serious offensive enterprise.

The failure of his ruse, and the loss of three of his most powerful ships, practically exhausted Baird's powers of serious offensive. His cruisers were engaged in preying upon commerce, and were eminently successful in that rather make-believe operation. The *Inflexible* with the *Hecla*, and a flotilla of torpedo-boats, had been sent

to Lough Swilly to prepare a protected anchorage against the anticipated return of the original raiding squadron from the North Sea. But the raiding squadron never reached the North Sea: what survived of it after its encounter with Tryon's fleet had returned to Queenstown. Thence it was again despatched by Baird on an enterprise similar to that which Tryon had undertaken in the previous year. It was ordered to pass to the westward and northward, and to raid upon the north-east coast, and since the protected anchorage at Lough Swilly was no longer of any practical service, the *Inflexible* was at a later date ordered to join the raiding squadron, of which D'Arcy-Irvine again took the command. The second enterprise undertaken by the raiding squadron under D'Arcy-Irvine was not much more successful than the first. Even when reinforced by the *Inflexible*, the reduced squadron was now no longer so strong or so fast but that its defeat and capture by a superior force despatched against it by Tryon was perfectly feasible. Moreover, since the previous year, the Admiralty had established a series of signal and observing stations on the coast, connected by telegraph with headquarters, so that a hostile ship or squadron could not show itself anywhere off the coast without the defending Admiral being immediately informed of its character and whereabouts. D'Arcy-Irvine appeared first on the east coast of Scotland and affected to reduce Peterhead, Aberdeen, and Leith, and to destroy the Forth Bridge. This was permissible according to the rules, but scarcely within the possibilities of actual warfare. He next made a demonstration off the Tyne, though it must be acknowledged that the idea of seriously injuring the Elswick works by means of bombardment from ships lying off Tynemouth is a mere absurdity. Proceeding southwards he encountered a superior squadron despatched by Tryon to attack him. The *Inflexible* was captured, but the *Anson*, the Rear-Admiral's flagship, managed to escape, and by this time the close of the period assigned by the Admiralty

for the duration of hostilities brought the manœuvres of 1889 to an end.

So far the order of evolution followed by the manœuvres from year to year had been logical and coherent. The manœuvres of 1885 were experimental and tentative, and the main plan of operations was left to the initiative of the distinguished Admiral in supreme command. In subsequent manœuvres the Admiralty itself took the initiative, and laid down beforehand the general scheme of operations to be carried out. The manœuvres of 1887 exhibited the risks necessarily encountered by an inferior naval force when it attempts to act on a vigorous offensive in the face of a superior defending force. This lesson was again enforced with still greater significance and cogency by the manœuvres of 1889, and though the result of the manœuvres of 1888 might seem to point to an opposite conclusion, inasmuch as Sir George Tryon, after forcing the blockade, was able to reduce Liverpool and to raid upon the north-east coast without molestation from his adversary, yet it must be remembered that the superior fleet, being on that occasion required to maintain a blockade, and having failed in that enterprise, was neither in force nor position to make full and immediate use of its defensive powers at other points of the field of warfare. In any case, moreover, the achievements of Tryon after the blockade was raised were a little wanting in strategic actuality, and his ultimate defeat by Baird, who still retained his superiority of force, could only be a question of time. For the rest the manœuvres of 1888 showed, not indeed that blockade is impossible in modern conditions of warfare, but that its successful conduct and continuance require a force specially adapted to the purpose, and very greatly superior to that of the squadron blockaded. From this point of view the manœuvres of 1889 were full of instruction. Instead of blockading Baird in his protected ports, Tryon was instructed to watch him from his own base, to act on the offensive so far as circumstances might permit, but not so far as

to interfere with the primary object of defending the shores of Great Britain against the assault of an enemy permitted and even invited to take the sea. In the result Baird's attack was foiled, and the flower of his fleet was captured. Once more it was shown that an inferior naval force, acting on a vigorous offensive, is exposed to such tremendous risks of defeat, capture, and destruction, that a prudent enemy would be forced to think twice or thrice before he engaged in so desperate an enterprise.

There is still, however, one thing that an inferior naval force may do, if it is strong enough to take the sea, but not strong enough to act on a vigorous offensive against the coasts of its enemy. It may undertake a *guerre de course*, as the French term it; that is, it may endeavour to destroy its enemy's commerce on the seas. This, in fact, is the only thing it can do if, on the one hand, the superior naval power does not think it worth its while to blockade the ports of its enemy, and, on the other, the inferior power recognizes and shrinks, as it must, from the tremendous risks inseparable from territorial attacks under the assumed conditions of relative strength. Accordingly the manœuvres of 1890, still following a logical and coherent order of evolution, were designed to elucidate the strategy to be pursued by a British naval commander in the event of his enemy electing to assail him by means of a *guerre de course* directed against the maritime trade of Great Britain. A portion of the Atlantic was designated as the trade-route to be attacked. It was purposely selected so as to avoid the main lines of Atlantic traffic which converge upon British ports, and to interfere as little as possible with the actual course of trade, since the mere pretence of capturing merchant-ships peacefully crossing the sea formed no part of the scheme of operations. Sir Michael Culme-Seymour, representing the enemy, with his base at Berehaven, was to start on a given day and to establish and maintain himself on the trade-route, always, however, endeavouring to avoid a general engagement. Sir George Tryon, with his base at Plymouth, was not to

start with his battleships until twenty-four hours after his adversary had quitted his base, though the cruisers on both sides had been allowed to put to sea simultaneously, when hostilities were regarded as imminent, for the purpose of watching the movements of their respective enemies. It is plain that under the foregoing conditions Culme-Seymour might fully comply with his instructions and yet completely baffle the efforts of his adversary to overtake or discover him by striking the trade-route at or about a point equidistant from Plymouth and Berehaven, and then steering a course along it with Plymouth right astern so long as hostilities lasted. From the point of view of manœuvres and their object, this was not perhaps "a sporting course to adopt," as his adversary put it in a memorandum issued to his captains at the outset of hostilities; but considering that Tryon, with his great strategic skill and his long and brilliant experience of manœuvres, regarded it as a probable course, it may perhaps be assumed that he himself would have adopted it had he been in his adversary's position. In that case it is justified by the concurrence of two very capable naval commanders, for Culme-Seymour adopted the precise strategy attributed to him by his distinguished opponent. The result was that the two opposing fleets never came into collision or even contact with each other at all; and though Culme-Seymour maintained his position on the trade-route, he only did so by going to a point so distant from that at which, if the route had been a real one, the lines of traffic leading to the British Isles would have converged, that his operations against his supposed enemy's commerce must have been of a very feeble and inconclusive character. He incidentally demonstrated, however, by taking colliers with him, and supplying himself with coal from them at the back of the Azores, that the operation of coaling a fleet of battleships at sea is a perfectly feasible one, if performed in latitudes where calm weather may be reckoned upon; and this result, though it was not contemplated by the scheme of manœuvres, was in itself

of considerable importance. On the other hand, Tryon, though the course taken by his adversary made it impossible for him to bring the latter to an action, or even to discover his whereabouts, was eminently successful in the dispositions he made for the defence of the trade-route within his proper radius of action. He demonstrated the paramount importance of Scilly as a naval base for a fleet engaged in such operations as he was required to conduct, and he showed quite conclusively that a naval force inferior to his own could not have attempted to establish itself on the trade-route at or near its point of greatest concentration, without running such risks of detection and defeat as no prudent commander would be justified in running for the sake of a mere *guerre de course*, unsupported by a fleet of battleships capable of trying conclusions on fairly equal terms with its adversary. Once more the moral and material ascendency of a superior "fleet in being" was abundantly and most instructively demonstrated.

We must not pass over the torpedo-boat operations, which were a subsidiary but most important feature of the manœuvres of 1890; indeed they would repay well a much more detailed examination. The official programme stated that "a further subsidiary object of the 1890 manœuvres is to ascertain what form the tactics of torpedo-boats operating from a distant base should assume." The base selected was Alderney, and the objective points to be assailed were Portland, where a reserve squadron was stationed, and the positions occupied to the westward by Sir George Tryon's sea-going squadron, together with any auxiliaries and colliers attached to it. The squadron at Portland was authorized to protect itself by mines, booms, nets, and such other fixed and mobile defences as were available, and at this point the attack of the torpedo-boats was foiled. But their operations to the westward were so vigorously conducted, so remarkable for the skill, daring, and endurance displayed by the officers engaged, as to show conclusively that the area of offensive operations,

accessible to torpedo-boats handled by officers who know their business, is so large as to expose the whole of the Channel to the ravages of torpedo-boats issuing from either side. In fact, no radius of action less extended than that represented by the distance between Alderney and Falmouth at the least can be assigned to torpedo-boats properly handled and fought. Tryon recognized this when he adroitly transferred his base from Falmouth to Scilly, leaving, however, a collier at the former place as a decoy for his enterprising little assailants, and taking care to provide them with a warm reception when they came. But on the first night of hostilities, when his fleet was tied by the regulations issued for the conduct of the manœuvres to its anchorage in Plymouth Sound, he had to sustain a spirited and most brilliant attack conducted by torpedo-boats which had left Alderney at nightfall. The result of the attack was left doubtful by the umpires, who found themselves unable to reconcile the conflicting evidence received by them. But its result, whatever it may have been, was altogether unimportant in comparison with the demonstration it afforded of the power of the torpedo-boat for mischief over an area largely greater than had ever previously been assigned to it.

It may here be mentioned that this line of experiment was further pursued in the torpedo-boat operations which formed a distinct and independent feature of the manœuvres of 1891. The bases assigned to the torpedo-boats on this occasion were the Irish ports of St. George's Channel. Their objective was a small squadron of ironclads with cruisers and torpedo gunboats under the late Admiral Long, then a captain, with his base at Milford Haven, and a freedom of range throughout the area accessible to the hostile torpedo-boats. Captain Long, himself a torpedo-expert of great experience and capacity, resolved to make his defence an active rather than a passive one—that is, instead of entrenching himself behind such fixed and mobile defences as are available when a squadron remains at its anchorage, and waiting for torpedo-boats to attack

him, he went himself to attack the torpedo-boats. The result abundantly justified the tactics employed. In no single instance during the operations was a torpedo-boat successful in its attack on an ironclad. Of the twenty boats engaged, four were adjudged to have been captured or destroyed, while seventeen separate attacks delivered by the remainder were adjudged to have resulted in the temporary disabling of the boat engaged. Besides this, two of the protecting ships attached to the torpedo-boat bases were destroyed by Captain Long, and the end of the operations left him completely master of the situation. It may be that the rules framed for the conduct of the operations were undesignedly and perhaps unavoidably less favourable to the torpedo-boats than the conditions of actual warfare would be; but even when full weight is allowed to this consideration, the superiority of active over passive defence remains manifest and indisputable. There are some who think that the supply of torpedo-boats provided by the Admiralty for the British navy is inadequate, and they point with alarm to the superiority in this arm exhibited by France and several other naval Powers. The question is too large and too intricate to be more than glanced at here. But we may say that in our judgment the governing consideration is this: that the torpedo-boat is essentially the weapon of a Power likely to be weaker than its adversary on the sea. Its *maximum* efficiency is in coast-defence and within a radius of action, much wider indeed than was at one time supposed, but still narrow enough as compared with that of a seagoing man-of-war. Within those limits it is very formidable, no doubt; but in all cases its moral terrors are, as has already been said, probably far in excess of its real offensive capacity. These facts we must recognize and deal with as best we may.* Admiral Long probably showed the best method of dealing with them. But the

* Since the above was written they have been duly recognized by the Admiralty, and dealt with very effectively in the vigorous and successful development of the new class of torpedo-boat destroyers.

primary operations of the British navy in time of war will be by no means confined to the area accessible to torpedo-boats, nor within that area is the torpedo-boat itself the best weapon for meeting the attack of the torpedo-boat. A Power therefore which multiplies its torpedo-boats is a Power which manifests its intention of relying mainly on a passive defence, and thereby recognizes the probable superiority at sea of such adversaries as it is most likely to encounter. England must never be allowed to sink to the level of such a Power, and therefore the torpedo-boat may well be regarded as a strictly subordinate, albeit a very important, factor in the naval policy of this country.

In the principal manœuvres of 1891 the strategic continuity of evolution hitherto maintained was interrupted in order that a more distinctively tactical character might be given to the operations contemplated. For the reasons already given, the tactical problem is far more profoundly affected than the strategic problem by modern changes in the methods and implements of naval warfare, and just as in actual warfare the field of strategy ultimately narrows itself down to the field of tactics, so in the evolution of manœuvres tactical operations may well be regarded as the logical sequel to a long series of strategic operations. But the operations of 1891 cannot here be described or criticized in any detail. The official report of the Admiralty had not been published when these pages were written, and though the writer had the advantage of witnessing the operations of the Northern Fleet, he would hesitate to pronounce an opinion on proceedings of which the real nature and bearing were made matters of official confidence.* On the proper disposition of the cruisers attached to a battleship squadron for the combined purposes of wide scouting and rapid communication; on the best order of battle to be adopted by a squadron of ironclads; on the relative importance and efficiency, in

* The report was subsequently published. It was, perhaps, less remarkable for what it said than for what it did not say.

respect of rapidity of fire and accuracy of aim, of heavy ordnance and auxiliary armaments respectively; and on many other points appreciable mainly by experts, it is understood that information of the utmost importance, and often of the most startling novelty, was obtained in the course of the operations; but such information may very properly be regarded as an *arcanum imperii*, not to be lightly made public for the information and guidance of our possible enemies, who are all of them very careful to keep what they know on such subjects to themselves. In a most instructive chapter of his "Naval Warfare," Admiral Colomb traces the history of the "Differentiation of Naval Force" in past times, and shows how the stern discipline of warfare in the last century led to a most remarkable simplification of types and uniformity of construction. To what extent that lesson has been neglected, amid the bewildering influences of modern scientific invention, may be seen clearly enough in the pages of Captain Eardley Wilmot's excellent work on "The Development of Navies during the last Half Century." It is not impossible that the manœuvres of 1891 may lead, as their principal result, to a movement towards that simplification of type which Admiral Colomb has conclusively shown to be a direct result of actual experience in warfare. To say that the day of very big guns is over would probably be an exaggeration. But it is certain, at any rate, that no naval Power, which neglects to determine for itself the relative value and importance of heavy ordnance and auxiliary armaments, and in consequence of that neglect finds itself encumbered with the wrong weapons in the hour of need, will escape serious disaster, even though its fleets be animated by the spirit and genius of Nelson himself.

Our task is now at an end, but a few words must be added in conclusion. We have seen how our long lack of warlike experience—for which as a nation we cannot be too thankful—has dulled the national tradition of confident dependence on the protection afforded to us by our Navy.

We have seen how several causes have contributed to the quickening of that tradition, not the least potent being the recognition by the Admiralty, by Parliament, and by the country at large, of annual manœuvres on a large scale and mainly strategic in character, as a permanent feature of naval policy. We have seen what those manœuvres have taught us; how time after time they have illustrated and enforced those indefeasible principles of naval strategy which, in the hands of the naval heroes of the past, have secured for England her glorious position on the sea. The one broad lesson which emerges from the whole survey is the advantage enjoyed by the superior naval force. It was his superiority of force, combined, as must be acknowledged, with his skill of disposition, which enabled Tryon to baffle Baird's raid upon the Channel. Again, it was Tryon's superiority of force which drove Culme-Seymour to the back of the Azores, and prevented his attempting to attack the trade-route at the only point where the effect produced was likely to be commensurate with the means employed. Superiority of force enabled Hewett to baffle Fremantle, and Baird to capture Fitzroy. It is true that Baird's superiority of force did not enable him to blockade Tryon and Fitzroy with success in 1888, but the true inference is, not that superiority of force is no advantage, but that in the particular case it was insufficient for the purpose aimed at. Without a superiority of force blockade is impracticable in all cases, the only question being how great the proportionate superiority must be. Of course it is a mere truism to say that, *cæteris paribus*, superiority of force gives the material advantage. No one in his senses would dispute the proposition. But the moral advantage enjoyed by the Power which possesses a superiority of naval force is even greater than the material. An inferior force may for a time avoid a collision with its adversary, and yet do immense damage to the maritime commerce of the Power opposed to it. It may even, as our own experience has often shown, fight an action with the odds against it, and win it, if it is better manned, better handled,

and better fought than its immediate adversary. But what it cannot do without running risks, which all experience shows to be not only tremendous but deterrent, is to act on a vigorous offensive, and undertake such enterprises as are involved in serious territorial attack, so long as its adversary possesses a superior "fleet in being" strategically so disposed as to be capable of interfering with its movements. Even an inferior "fleet in being" may, as Torrington showed, be so handled as to paralyze the offensive designs of its adversary, though it cannot itself act on a vigorous offensive.

In sum, a Power which, like England, relies and must rely on naval defence for its security, must make that defence an active one, must regard its maritime frontiers in time of war as being conterminous with the territorial waters of its adversary. What it requires for this purpose is a Navy so strong as to be incapable of losing the strategic command of the sea, until its leaders and rulers have forgotten the traditions and example of their forefathers. We may rely upon the spirit of the Navy to do for us all that loyalty, devotion, intelligence and capacity can do. We must rely on the spirit of the nation to give our only possible defenders a supply of weapons adequate to their duties and adapted to their needs.

J. R. T.

NAVIES AND COMMERCE.

IN 1894 a Parliamentary return relating to "Navies and Commerce" was issued by the Admiralty, in continuation of similar returns previously issued. The figures contained in this return seemed to me to be so incomplete and otherwise misleading that I sought and obtained the permission of the Editor of the *Times* to criticise them in a letter which appeared in that journal on Sept. 22, 1894. I am not, however, entitled to assume the sole responsibility for the argument involved, because the *data* on which it was founded were, as was intimated in the letter, furnished to me by a high authority whose identity I am not at liberty to disclose. The return has since been republished in a more or less revised form, with figures applicable to a more recent date. To these later figures some of the criticisms advanced in my original letter do not directly apply. I propose, therefore, in this paper to subject the revised figures to a fresh examination; and, to make the argument complete, I have obtained leave from the conductors of the *Times* to reproduce such portions of the original letter as seem to be generally applicable to the case. A few words have been altered here and there for the purpose of defining my meaning more clearly and guarding it from misconstruction; but the quotations reproduce in substance the text of the original letter. The letter began as follows:—

"A few days ago, under the suggestive title 'Navies and Commerce,' you printed the principal figures given in a recent Admiralty return, apparently intended to show

the extent of the maritime commercial interests of the British Empire as compared with those of other Powers, and the amount and character of the naval defence provided for the purpose of protecting those interests. On the following day you commented on these figures in a leading article bearing the same title. I should like, with your permission, to offer some further comments from a slightly different point of view.

"In the first place, I would ask permission to emphasize and expand your own demonstration that the maritime commercial interests of the British Empire differ not merely enormously in degree, as the figures clearly show, but altogether in kind from those of any other Power. England exists by her maritime commerce, and cannot exist in any other way. If she cannot maintain its security in war, as in peace, she must perish—must, that is, accept whatever terms are offered to her by a Power which has made itself her master at sea. This is not directly a question of food. There is always food enough in the country to maintain the population for six months at least. . . . But the daily march of our industry, and with it the whole complex and infinitely delicate process of our national subsistence, depends upon the free entry and egress of our maritime commerce. No other Power in the world is in this condition. All our foreign commerce must reach us by way of the sea. The foreign commerce of any other nation is a trifle in comparison, and so far as it is sea-borne it could, in an emergency, reach its destination through neutral ports and over neutral territory. Hence no foreign Power ever can or will defend its maritime commerce at sea when it is at war with England. It cannot do it, because, as a French writer has said, *l'océan ne comporte qu'un seul maître*, and England in command of the sea will always be mistress of the maritime commerce of her enemies; it will not do it, because, if ever it wrests the command of the sea from England, it will find a far more effective and deadly weapon of warfare in the destruction of England's

commerce than in the defence of its own. For this reason we need not trouble ourselves in the least about the proportional relation between the naval expenditure of any Continental Power and its maritime commerce. There is and there can be no organic relation between the two. Continental Powers maintain their navies for the general purposes of maritime defence; among those purposes the defence of a maritime commerce which would probably disappear from the sea at the outbreak of a war with England — and could disappear from the sea without vitally injuring the Power affected—cannot be included. But a purpose which can and must be included is an attack on the maritime commerce of England. Following Captain Mahan and all the best authorities on naval warfare and its history, I hold that such an attack, though it may annoy us, cannot ruin us so long as England's command of the sea remains unimpaired. But let us not deceive ourselves in the matter. So far as the maritime preparations of other Powers are more than sufficient for the purposes of local and territorial defence, they can have but one of two objects—either to assail, and, if possible, to overthrow, the maritime supremacy of naval Powers stronger than themselves with which they may be at war, and therefore more especially of England, or, regarding that supremacy as unassailable, to inflict as much damage as possible, by means of a *guerre de course*, on the maritime commerce of their possible enemies, of whom England, with her vast and indispensable maritime commerce, is, from this point of view, the most assailable. The defence of their own maritime commerce in a naval conflict with England does not and cannot enter into their calculations. They would have no such commerce to defend, and they could not defend it if they had. This is not a matter of argument, but a matter of fact and experience. Admiral Colomb has pointed out in the 'Naval Annual' 'that in the year 1797, when Sir John Jervis was forced to retire to Lisbon in consequence of the union of the French and Spanish fleets, *not a single ship under the British flag*

cleared from any British for any Mediterranean port.' We temporarily lost the command of the Mediterranean, and our flag and our commerce forthwith disappeared from that sea. This and nothing else is the strategic meaning of the command of the sea. If Sir John Jervis had lost the battle of Cape St. Vincent, our maritime supremacy might have been overthrown as a consequence, and with it our maritime commerce would most certainly have disappeared. We might in those days have recovered from such a blow; nowadays it would instantly be fatal. Well might Sir John Jervis say, on the morning of that memorable battle, 'A victory is very essential to England at this moment.' If ever our maritime supremacy comes to depend again on the issue of a single battle, defeat will mean absolute and instant destruction.

"If the foregoing considerations are sound, and they are based alike on history and experience and on the best authorities in the interpretation of both, it follows, in the second place, that, while we may neglect the maritime commerce of other Powers altogether, we must entertain no illusions as to the immense extent and vital importance of our own. The figures are certainly significant enough in their bearing on the question of Colonial interests in Imperial defence; but their significance in this respect is really almost trifling in comparison with that of their importance to the people of the United Kingdom. The people of the Colonies have, no doubt, very much to lose by the overthrow of our naval supremacy, but their losses could hardly be irreparable, and they can safely look forward to a future in which they would almost be insignificant. They will not always be as we always must be, absolutely dependent on maritime commerce for existence. How absolute this dependence is is by no means clearly and adequately shown in the returns prepared by the Admiralty. These returns are defective in a variety of important respects, and to that extent they largely and mischievously underrate the volume and value of the maritime interests of the British Empire."

It will here be convenient to give in the form and with the explanations issued by the Admiralty such portions of the return of 1895 as are required for my purpose:—

Countries.	Aggregate Naval Expenditure.	Aggregate Tonnage, Mercantile Marine (Vessels of 100 Tons gross and upwards).	Value of Seaborne Commerce, including Bullion and Specie.
British Empire:	£	*Tons.*	£
United Kingdom	16,328,117 (*i*)	12,117,957	748,521,041
India	972,985 (*a*) (*k*)	50,745 (net) *	66,701,526 (*a*) (*b*)
Self-governing Colonies.	220,216 (*g*)	938,476 (net) *	83,949,104 (*b*)
Other Colonies (*f*)	—	120,007 (net) *	55,313,920 (*b*) (*h*)
Total British Empire	17,521,318	13,227,185	954,485,591
France	10,825,040	1,094,752	294,753,414
Russia	5,114,569	487,681	69,665,220 (*l*)
Germany	4,318,125	1,886,812	150,693,600 (*d*)
Italy	3,845,690	778,941	44,286,349
Spain	937,746	554,238	55,105,106
Austria-Hungary	1,081,766	304,970	24,063,580 (*d*) (*l*)
Netherlands	1,234,356	446,861	53,372,574 (*l*)
Portugal	649,944	103,620	21,191,000 (*c*)
United States	5,073,365	(*e*) 994,675 (net) *	393,393,736
China	?	19,172	52,757,000 (*c*)
Japan	1,127,974	301,101	29,174,000
Chile	50,221	103,085	32,324,000
Brazil	1,592,740	148,769	31,304,108 (*c*)
Argentine	526,427	62,278	41,746,860
		From Lloyd's Universal Register. Those marked * from Board of Trade Returns.	From Board of Trade Returns. Figures for Brazil, from "The Statesman's Year Book."

(*a*) Converted into sterling at the rate of 1*s.* 4*d.* the rupee.
(*b*) Excluding trade with the United Kingdom, and necessarily counting inter-colonial trade twice over.
(*c*) Total trade.
(*d*) Approximate only, the returns make no distinction between seaborne and overland trade.
(*e*) Does not include vessels engaged in Lake, River, and Home trade.
(*f*) There are no returns for Hong Kong, Gibraltar, and Malta. The trade of Hong Kong with countries other than the United Kingdom is estimated at upwards of £40,000,000.
(*g*) From the "Victorian Year Book, 1893."
(*h*) All figures for the commerce of the Colonies are from Board of Trade Returns.
(*i*) Of this total, £15,297,425 was ordinary expenditure; and £1,030,692 was expenditure under the Naval Defence Fund (outside Navy Votes).
(*k*) Includes a contribution of £50,000 for Her Majesty's ships in Indian waters, and £61,053 (including £1453 balance of subsidy for 1892–93), for Her Majesty's Ships and vessels for the Naval Defence of India. The amount to be paid under the last head will in future be £59,600 annually. The balance represents expenditure on the Royal Indian Marine. The question as regards the contribution on account of Her Majesty's Ships in Indian waters is now settled, and the payment on account of this service will be £117,000 for 1895–96, and thenceforward £100,000 annually.
(*l*) Imports for home consumption and exports of domestic produce only are shown in Board of Trade Returns.

The return for 1895 includes, for the first time, the value of bullion and specie carried at sea, which I noted as absent from its predecessor. But it apparently takes no account of a trade known as the transhipment trade, the share of which for the British Empire I estimated, on the high authority I have indicated, at £10,000,000 each way. It will also be observed that, as regards the Colonies, "there are no returns for Hong Kong, Gibraltar, and Malta;" but that "the trade of Hong Kong with countries other than the United Kingdom is estimated at upwards of £40,000,000." Adding this sum to the transhipment trade, estimated at £20,000,000, we find the total value of the seaborne commerce of the British Empire is still under-estimated in the return by at least £60,000,000, and ought to stand, not at £954,000,000 odd—the figure given in the return—but at £1,014,000,000.

However, this stupendous figure does not by any means represent the total value of British interests at sea. It will be observed that the aggregate tonnage of the mercantile marine of the United Kingdom is given as 12,000,000 odd, which is represented as carrying seaborne commerce to the value of £748,000,000. On the other hand, of the Powers represented in the return—which are by no means all the maritime Powers, Sweden, Norway, and Denmark, not to mention others, being omitted—the total aggregate tonnage is only 7,000,000 odd, while the total value of their seaborne commerce is not less than £1,280,000,000. Hence it would appear at first sight that England, the greatest of all commercial nations, carries in her own maritime trade a much smaller value of goods per ton of shipping than almost any other Power—and this notwithstanding the fact that she carries far more bullion and specie than any of her rivals, and that this kind of cargo is the least bulky and most valuable of any. This is absurd, on the face of it. The explanation is, as I pointed out in my original letter, that "whereas a very small portion of British maritime commerce is carried in foreign ships, a very large portion of the maritime commerce of

the whole world is carried in British ships. Moreover, of the goods carried in these British ships trading from one foreign port to another, no inconsiderable portion is owned in transit by British merchants, although, from the nature of the case, the value of such goods goes to swell the aggregate maritime commerce of other countries." There is, moreover, a large excess in the value of the sea-borne commerce attributed in the return to countries other than the United Kingdom, which is due to the following circumstance. The imports to, and exports from, the United Kingdom are in all cases included in the returns relating to other countries, having been already included in the figures given for the United Kingdom. I find from "Whitaker's Almanack" that the imports and exports in question amount, for the countries included in the return, to about £380,000,000. Therefore, the net value of the commerce of those countries is not £1,280,000,000, but £900,000,000. Adding this sum to the value of the sea-borne commerce of the British Empire given in the return as £950,000,000 odd—though it ought, as I have shown, to be more than £1,000,000,000—and dividing the total so obtained by the total amount of mercantile marine tonnage given in the return—13,000,000 for the British Empire, *plus* 7,000,000 for the other countries—I find that the average value of goods carried per ton of shipping is approximately £90. It is not necessary for this purpose to take account of unemployed tonnage, whether British or foreign, because its deduction would merely raise the average value of goods carried per ton of shipping without otherwise affecting the calculation. Now, the tonnage of the United Kingdom is 12,000,000, and this would suffice to carry £1,080,000,000 worth of goods. According to the return, it only carries about £750,000,000 worth. I exclude the Colonies from this calculation, because the value of their trade with the United Kingdom is not included in the return. Hence there remains a balance of £330,000,000 worth of goods carried at sea in British bottoms to be accounted for. This represents approximately the amount

of foreign maritime commerce carried in British bottoms; and if we take into account the seaborne commerce of the maritime Powers not included in the return, it will hardly be thought an extravagant estimate to put the total amount at approximately £350,000,000.

Probably at least half of this £350,000,000 worth of goods carried in British ships for foreign countries is owned by British merchants in transit. But for purposes of maritime defence in time of war it makes little or no difference whether these goods are owned by British or by foreign merchants. It is true that by international law goods owned by a neutral are not liable to capture by a belligerent, even when conveyed in a ship which sails under an enemy's flag. But the ship itself is liable to capture, and must therefore be protected. If an enemy could seize it he would carry it, cargo and all, to one of his own prize courts, and leave the ownership of the cargo as between neutral and belligerent to be determined by the court. In these circumstances either we should have to guarantee the neutral owner against the capture or detention of his cargo, or we should so far lose the carrying trade between foreign countries which we hold at present. Hence I am entitled to reckon the whole of this £350,000,000 as a factor of British maritime commerce which must be protected in war.

It thus appears that, instead of the £950,000,000 at which the seaborne commerce of the British Empire is estimated in the return, the original figure should stand, as I have shown, at £1,014,000,000 at least, or, to take round numbers, we may say at £1,020,000,000. To this there must be added £350,000,000 for the value of the maritime commerce of foreign countries which is carried in British bottoms. A further sum of £132,000,000 odd must be added for the value of the mercantile marine shipping of the British Empire, taking it at the very moderate estimate of £10 per ton; and I am informed, on the high authority to which I have already referred, that the annual value of securities and other marketable documents carried to

and fro in British ships and owned by British subjects in transit cannot at a moderate estimate be put at less than £250,000,000. Thus the total value of British commerce at sea stands not at £950,000,000 odd, but at £1,750,000,000 at least, and this is the real amount of property afloat which we should have to protect in time of war.

In this estimate some elements are more or less conjectural, and few, if any, are more than approximate. But I have striven to avoid exaggeration in framing it, and probably such errors as it may involve are rather on the side of defect than on that of excess. It is worthy of note that the aggregate naval expenditure of the British Empire is given in the return for 1895 as seventeen and a half millions, so that if we take the value of the maritime interests protected at £1,750,000,000, it appears that the cost of insurance of these stupendous interests is exactly one per cent. The value of the seaborne commerce of France is given in the same return as £294,000,000 odd, and the aggregate naval expenditure as very nearly eleven millions. We must, however, add to the value of French maritime interests given in the return a sum of £10,000,000 odd to represent the value of French mercantile marine tonnage. It will be seen presently why I add nothing else to the total, and why, for purposes of comparison, a very large amount ought to be subtracted from it. But, taking the value of French maritime interests as £305,000,000, and the aggregate naval expenditure of France as eleven millions, it appears that the naval defence of French maritime interests costs more than three per cent. A similar calculation applied to the figures given in the return for Russia shows that the cost of Russian maritime insurance expressed in terms of naval expenditure is not less than fifteen per cent. A mere comparison of these figures suffices to place in strong relief the truth of the propositions quoted above from my original letter:—"We need not trouble ourselves in the least about the proportional relation between the naval expenditure of any Continental Power and its maritime commerce. There is no organic relation

between the two. . . . The defence of their own maritime commerce in a naval conflict with England does not enter into the calculations of these Powers. They would have no such commerce to defend, and they could not defend it if they had." But, in truth, the whole comparison is vitiated by a peculiar characteristic of the return on which I commented as follows in 1894 :—

"There is yet another and very serious error in the returns. As regards India and the Colonies, a note states that trade with the United Kingdom is excluded. Of course if it were included it would be reckoned twice over ; but for purposes of comparison it ought so to be reckoned, since the returns relating to other countries include the trade with the United Kingdom, which has already been included in the trade of the United Kingdom. If any exclusion is to be made on this account, it should be made uniformly in every case, or else the comparison is completely vitiated. There is, moreover, this difference between the maritime trade of the United Kingdom with British Colonies and dependencies, and that of the British Empire with any foreign Power. The latter would cease to exist in the event of war between England and the foreign Power in question, except so far as it could be more or less clandestinely carried on in neutral ships trading to neutral ports. The former, so long as it obtained adequate naval protection, would maintain its volume substantially unimpaired. It might even increase very largely, as it did in the wars of the last century. In order to make the comparison even approximately fair, therefore, we must do one of two things. Either we must deduct the whole trade of Great Britain with foreign Powers from the figures which relate to those foreign Powers—in which case we should reduce the maritime commerce of many foreign Powers to a negligible quantity —or we must add to the figures relating to the British Empire the whole sum which represents the interchange between the United Kingdom and British Colonies and dependencies. Now, I find from "Whitaker's Almanack"

that the total seaborne trade of India was valued in 1892–93 at Rx.196,000,000 odd, so that on the basis of comparison here proposed a sum of £93,000,000 odd must be added to the maritime interests of the British Empire as estimated in the return in respect of India alone. The corresponding amount assigned in the return to the self-governing Colonies is £88,000,000 odd, while the sum of £55,000,000 odd is assigned to the "other Colonies." Now, "Whitaker's Almanack" gives the exports to and imports from the United Kingdom in 1892 as about £21,000,000 for Canada, as £56,000,000 odd for Australasia, as £19,000,000 odd for the Cape Colony, and very nearly £4,000,000 for Natal. In the same proportion we may add about £50,000,000 as representing the maritime commerce of the United Kingdom with all the other colonies.

"Now, I do not contend that in these figures no item is reckoned twice over. But I do contend that no item is reckoned twice over in my way of putting the matter which is not equally reckoned twice over in the Admiralty way of putting the matter in respect of the maritime commerce of every Power other than the British Empire. I do not, for the reasons given above, attach much importance to any comparison between the maritime interests of the British Empire and those of any other Power whatever. The two things are, in my judgment, absolutely incommensurate. You might almost as well compare Niagara with a watering-pot. But, if such comparisons are to be made, they must be made on a common basis. There is no such common basis in the returns issued by the Admiralty, and, even if there were, I have shown that items of immense importance are left out of the account altogether, so that the total volume of the maritime interests of Great Britain, estimated in the same way as the maritime interests of other Powers are estimated throughout the return, is made to appear not very much more than half what it ought to be."

I have not thought it necessary to correct the figures here given in accordance with later returns, because the

estimate is only made for the purposes of comparison on a uniform basis, and for such purposes a very rough approximation suffices. It is true that the approximate net value of the maritime interests of the British Empire cannot, as we have seen, be placed at a much higher figure than £1,750,000,000, and if this were compared in the return with the net value, similarly estimated, of the maritime interests of other countries, no further correction would be needed. But the return as compiled allows no such comparison to be made. It practically gives the gross value of the seaborne commerce of other countries —in some important cases giving even the total value of imports and exports by sea and land—whereas it excludes altogether from the returns given for the Colonies the value of the commerce interchanged between the United Kingdom and the Colonies. Hence, whatever the comparison may be worth when properly made—and I confess I do not think it is worth much in any case—it is manifestly worth less than nothing unless it is made, as it is not made in the return, on a uniform basis. To make it on a uniform basis it is necessary to add to the net value of British maritime interests, already estimated at £1,750,000,000, further sums of £93,000,000 for the trade of India with the United Kingdom, of £21,000,000 for that of Canada, of £56,000,000 for that of Australasia, of £23,000,000 for that of South Africa, and of £50,000,000 for that of the other colonies, making a total of £243 000,000; or, if a very moderate allowance be made for the growth of Indian and Colonial trade, we may put it in round numbers at £250,000,000.

Thus, while the net value of British maritime interests is probably not very much more than £1,750,000,000, yet if we make the estimate on the same basis as that which is taken in the return for all the other countries enumerated, we must put it at £2,000,000,000. The smaller sum approximately represents the real value of the maritime interests we have to defend in time of war; the larger represents the figure we must take if we wish to determine our rate of maritime

insurance expressed in terms of naval expenditure, and to compare it with the corresponding rate of other Powers on the basis given in the return. The Navy Estimates for 1896 provide for an expenditure of a little under twenty-two millions. This represents an insurance of 1·1 per cent. on the gross value of the interests insured. It thus appears that our rate of insurance is rising. But its true measure is a compound of two factors, one of which is the value of the interests to be insured, the other the strength of the hostile forces likely to imperil them in time of war. Now the aggregate naval expenditure of France and Russia is given in the return as less than sixteen millions. In the Navy Estimates of the two countries for 1896 it amounts to over seventeen millions, an increase of six and a quarter per cent. As the bulk of this increase must, as I have shown, be for purposes of attack and not of defence, and as the most salient object of attack must always be the maritime commerce which is the lifeblood of the British Empire, our very existence would be imperilled if the rate of our maritime insurance had been allowed to remain stationary.

J. R. T.

NATIONAL INSURANCE.*

IN the *United Service Magazine* of May, 1890, the late Vice-Admiral Sir George Tryon revived an important proposal for the "national insurance" of the war risks of the mercantile marine. In the following number, Lord Charles Beresford is stated to have knocked "Sir George's proposal to bits," apparently by asking two questions not specially difficult to answer, and by the assumption that the country would never "allow the State to interfere in a matter so entirely commercial." Briefly summed, Sir G. Tryon's contention was that, while "a fleet adequate to our needs, coaling-stations, and strategical harbours, defended and kept as our ships in commission, always ready for war," are necessarily vital to the security of the Empire, there are certain risks arising from the effects of a sudden advance of insurance rates which must be otherwise met. "Our greatest pinch will probably be immediately after the first two months of war." To meet these risks, to prepare for this pinch, Sir G. Tryon proposed to create a State system of war insurance, by which premiums would be kept within bounds. The real liability thus incurred would, he considered, be relatively small; but its acceptance by the State would effectually prevent any transfer on a large scale of British commerce to a neutral flag. On the other hand, Lord Charles Beresford holds that it is "cheaper to the nation" to maintain an adequate fleet, that the initial panic created by the outbreak of war

* *United Service Magazine*, September, 1890.

would subside, and that the transfer of British commerce to a neutral flag is beset with difficulties, as is unquestionably the case.

Other combatants subsequently entered the field, and raised side issues of some importance. Mr. Gibson Bowles complains that his predecessors write "from the naval point of view alone," and do not "rise to the ground of the publicist." In his view there is only "one thing needful," and so simple—nothing more than the abrogation of the Declaration of Paris. Mr. Haines, in a paper by no means "tedious," discusses the aspects of privateering from the point of view of International Law, and contemplates with dismay certain recent modifications of that law which this country is regarded as having practically sanctioned. The effect of these various opinions upon a mind which is not naval and cannot aspire to the elevation of the publicist is somewhat bewildering. The proposal which Sir G. Tryon urged with much force appears eminently worthy of being reduced to a practical shape; but it is stated to have been swept away by another sailor, also dealing with the matter from the naval point of view. Mr. Bowles's panacea is of all the most attractive, for it holds out safety to the Empire, attainable by a stroke of the pen. This very attractiveness, however, suggests suspicion, and it seems desirable to examine "the one thing needful" before accepting it as a final and complete remedy for the prospective ills of war.

Mr. Bowles, unlike Lord C. Beresford and many naval officers of experience, considers that the Navy of Great Britain would "more than suffice . . . not merely to destroy the enemy's commerce, and to drive his merchantmen from the seas, but also to protect her own commerce and to secure safety for her own merchantmen." * But this power—vital, as we all agree, to the very existence of the Empire—has been gratuitously abandoned by the signing of the Declaration of Paris. It exists no longer since the adoption of "the rule of 'free ship, free goods.'"

* This was written in 1890.

The hopelessness of our present position is forcibly summed up in the words—"the Declaration of Paris would ruin our shipowners; would but very imperfectly protect our merchants; and would not protect at all the nation at large from starvation, or the nation's fleets from coal famine." The train of reasoning by which this remarkable conclusion is reached can be readily understood. "Our merchandise would, under the new rule, fly at once, on the outbreak of war, to neutral bottoms, and our merchantmen would lose all employment." The British Navy would thus be reduced to impotence. There would be nothing for it to capture. It would not, "in all probability, find so much as an enemy to fight with. Why should the enemy fight under these circumstances?" War with a naval Power thus means total inactivity to the belligerent fleets, while one belligerent, and that curiously enough the one strongest on the seas, is rapidly ruined, merely by the operation of this hyper-dramatic "Scrap of Paper." Obviously, the only course open to us is either to abrogate the Declaration of Paris at once, or get rid of the Navy as a costly encumbrance in peace and a worthless illusion in war. In Mr. Bowles's view, the apotheosis of paper has apparently been reached.

Before pointing out the contradictions in which this article is hopelessly involved, it will be well to examine the historical basis on which the whole structure rests. This resolves itself into the old misreading of the American Civil War. Two or three small and slow * Confederate steamers succeeded in maintaining themselves on the track of American sailing vessels, and made numerous captures. Notwithstanding that this *guerre de course* was one of the well-known methods of war recognized two centuries previously, the directing head of the Federal navy, with ample resources at his disposal, appears to have been incapable of taking any effective

* "The speed of the *Alabama* was always overrated by the enemy. She was ordinarily about a ten-knot ship."—"Memoirs of Service Afloat." Admiral Raphael Semmes, 1869.

action. Captain Semmes, the able and successful commander of the *Sumter* and *Alabama*, has pointed out how easily his operations might have been checked; and it is a fact that Mr. Bowles's article could never have been written if Mr. Welles, the Secretary of the Federal navy, had possessed any clear ideas of naval strategy.* The depredations of the *Alabama* caused insurance rates to be fixed at the following figures:—

North of Europe	5 per cent.
Mediterranean	6 ,,
India	4½ ,,
Gulf	4 ,,
West Indies	5 ,,
Coast	1½ ,,

The carrying trade of the United States passed mainly into British hands, and the publicist has never ceased to misread the moral. The actual fact is indisputable; but the moral is of another kind. It is essential to Mr. Bowles's argument from history that a great transfer of ships to another flag should have taken place. Cargoes neutralized by some waste-paper process, but carried in the vessels of a belligerent, clearly could not count on the kind of immunity which commerce demands. The accommodating neutrals, who, it is asserted, will obtain all our trade, must, therefore, acquire our ships as a necessary first condition. But no great transfer of American ships appears to have taken place.† The surplus tonnage of the greatest mercantile Power of the world was called into play to supply the needs of American commerce. Other powerful forces were, however, at work. The period chanced to coincide with that of a great conversion of sailing to steam trade, and a large replacement of wooden vessels by those of iron and steel. The United States, in the throes of a terrible convulsion, were evidently less

* "The old gentleman does not seem once to have thought of so simple a policy as *stationing* a ship anywhere."—"Memoirs of Service Afloat." Admiral Raphael Semmes, 1869.

† The ships were laid up in neutral harbours, and Captain Semmes was only able to look longingly at them.

able to carry out the change than the rich neutral Power on this side of the Atlantic. The new steamers were thus almost entirely British, and in the great internal development of the Republic which followed the peace, American capital found more lucrative employment than was offered by competition with Great Britain in the shipping trade. Many writers have held that the United States could regain a full share of that trade at once by the mere abolition of their own navigation laws; but the shrewdest of business people may be trusted to safeguard their own interests, and it is by no means certain that the time has fully arrived when a diversion of their capital to shipping would be profitable.*

The real lesson of the American War is very simple. Given a belligerent quite incapable of checking the raids of a few very indifferent cruisers, and a strong neutral Power possessing a far greater mercantile marine with available surplus tonnage, a transfer of carrying trade from the former to the latter is obviously inevitable. Given, further, that a revolution in shipping is occurring at this precise epoch, it is clear that the neutral will reap the benefit. Economic forces were, in fact, ready to come into play, and the disturbance of equilibrium caused by the American War gave them the necessary impetus. The balance having swung over heavily, and the economic forces still making for Great Britain, the rehabilitation of the American carrying trade must necessarily be slow.

There appears to be no other satisfactory explanation of the historical facts. The senseless war of 1812–14, into which Great Britain and the United States drifted, "annihilated" † the foreign trade of the latter. Yet that trade recovered itself. The trade of Germany temporarily

* There are signs that this time will soon be reached, and competition in the shipping trade must then be expected.

† "Their foreign trade anterior to the estrangement from England —twenty-two millions exports, and twenty-eight millions imports— was, literally speaking, annihilated; for in 1814 exports had fallen to £1,400,000, and imports to less than three millions."—Professor Seeley.

disappeared in 1870–71, but quickly revived, and even flourished. Here are two instances, one before and one after the Declaration of Paris, and it seems clear that economic forces ruled the issue.

Mr. Bowles, however, does not recognize that a great transfer of ships to the neutral flag is essential to his argument. "British merchant ships would at once—not merely on the outbreak, but on the mere rumour of war—cease to find employment," he incautiously writes. Who then will carry on the trade? No neutral, or aggregate of neutrals, has either the ships or the men. Of the total tonnage of the world less than ten years ago, about 13,200,000 was British, and 11,000,000 foreign. Is it conceivable that the eleven millions can do their own work and suddenly take over that of more than thirteen millions in addition? A wholesale transfer of shipping must, therefore, take place, and such a transfer bristles with difficulties. Lord Charles Beresford has effectively explained the nature of these difficulties, and an able writer in the *Edinburgh Review* * has dealt with the subject more fully. On this point at least weight must surely be accorded to naval opinion. If it is really true that our great shipowners are contemplating the easy transfer of their vessels to a neutral flag, as Sir A. Forwood has complacently indicated,† they must have neglected to study the ways and means. It is sufficient to state that no neutral Power could officer or man a fraction of the vast fleet which it would have to absorb, so that a wholesale transfer of men as well as ships must take place; that a long period must elapse before a complete revolution in the greater part of the trade of the world could be accomplished; and that no transfer of men or ships would be recognized by a belligerent if it appeared to have been carried out to avoid capture. This last consideration involves others of much importance. No weak naval Power could possibly become the custodian, temporary or permanent, of the trade of the British Empire. "The

* October, 1888. † Speech at Liverpool, 1888.

carrying trade of England would, therefore, go to Belgium, to Holland, to Denmark, to Sweden, perhaps to Italy," states Mr. J. Russel Soley,* thus admirably illustrating the effects of the neglect of "the naval point of view." No strong naval belligerent would be thwarted by the flag of the first four of these countries if it stood directly in his way, and the receptive neutral would quickly be driven into belligerency. Weak neutrals invariably go to the wall in naval warfare, and, as Mr. Soley himself points out, the United States require a strong navy merely to guard their own neutral rights. What naval strength will be required to guard the vast interests acquired by the Power which may, according to Mr. Bowles, be suddenly invested with the responsibilities of the enormous commerce of the British Empire? What neutral would be eager to accept these tremendous responsibilities?

Mr. Bowles has unfortunately omitted the first logical step necessary to his thesis. It is essential for him to show that an enormous and rapid transfer of British bottoms and British seamen to a neutral flag is practicable, and until he has proved this to the satisfaction of naval authorities *cadit quæstio.* On this alone hangs the operation of the dreaded "piece of paper."

For the rest, his statements are mutually destructive to a surprising extent. The Declaration of Paris, he tells us, has ordained "that neutral bunting should for the first time play a part in belligerent hostilities" (*sic*); but a page later we learn that "Already, in January, 1799, the French Directory had reported to the Consul des Cinq Cents, 'it is unfortunately too true that there is *not a single merchant vessel navigating under the French flag.* What other means of exportation have we than the employment of neutral vessels?'" In other words, precisely what the Declaration of Paris is stated to have rendered possible "for the first time" occurred in 1799; the only difference being that, in the one case, the weaker naval Power sought the protection of the neutral flag, while in the

* *Scribner's Magazine*, November, 1889.

other case we are asked to believe that the strong naval Power will alone suffer. Great Britain, with a naval strength which Mr. Bowles states would suffice, "without any increase at all," to protect her commerce, had she but retained her "maritime rights," is nevertheless to see the whole of her commerce pass under an alien flag in the event of war with an inferior naval Power. Supposing that that Power should be France, what is to become of French commerce? That, too, must evidently disappear, and the benevolent neutral trustee will have enough on his hands.

But Mr. Bowles has other paradoxes in store. When the hypothetical neutral—the Mrs. Harris of the publicist—has acquired our ships and decorated them with his flag, it will not, at any rate, protect contraband of war, and Mr. Bowles rightly shows that "corn and coal—the one indispensable to our people, the other to our fleets—have constantly been held to be contraband of war." The Declaration of Paris cannot, therefore, really affect these essentials. Their safe transit between Imperial ports must depend ultimately upon the strength and handling of the great Navy, which we are told would now find no war employment. Food and coal, if they are to be carried on the seas at all, must be thus protected. The ships which are carrying food and coal to-day may as well continue to carry them, since they run no greater risk than any others. Some few functions still remain, therefore, to the British Navy, and considering the large proportion of shipping employed in carrying these necessary commodities, Mr. Bowles's fears seem capable of alleviation.

It is insurance rates which, thanks to the Declaration of Paris, are to work our ruin. The merchant "would find that if he shipped that merchandise in British ships, he would have to pay a war-risk premium of insurance on his merchandise of at least 5 per cent., or in some cases of from 10 to 12 per cent." During the French wars, from which Great Britain emerged triumphant at sea with a commerce enormously increased, insurance rates rose to 12 per cent. with convoy and 20 per cent. without. It is true that

freights were then high; but war will raise freights, and our neutral legatees would probably not carry at peace rates. "The mere rumour of war" is, we are told, to destroy our carrying trade; but it has not done so. The Trent affair caused premiums of 5 per cent. to be charged in some cases for war risks, but did not inflict any injury upon our shipping. Assuming premiums to rise to 5 or 10 per cent., Mr. Bowles estimates the liabilities which Sir G. Tryon's proposal would throw upon the State at "from £35,000,000 to £70,000,000 a year on merchandise alone." He has, however, previously told us that he considers the British Navy quite sufficiently powerful to protect our commerce; and, whatever may be the possible effect of the Declaration of Paris, it has at least provided no immunities for an enemy's armed vessels, by which alone that commerce can be assailed. If Mr. Bowles's view of our naval strength is correct, then evidently Sir George Tryon's scheme saddles the State with no real risks at all.

How is it possible to reconcile the statements here put forward? We are told that, "under the old system," British merchants were able to "carry on their trade with all but complete security," and that at the beginning of the century the underwriters of Bombay congratulated Sir E. Pellew on the "ample protection" the commerce of the Indian seas had received. But, as Mr. Haines points out, England lost in the French wars from 1793 to 1815 "no fewer than 10,871 merchantmen"; while the Calcutta merchants congratulated the Governor-General on the tardy capture of Mauritius, "which has for so many years past been the source of devastation to the commerce of India to a magnitude almost exceeding belief." The facts are that, in place of the "all but complete security" which Mr. Bowles fancifully pictures, there were enormous losses; but the great development of the sea power of Great Britain carried all before it, and left her pre-eminent in commerce as in naval war. This is the clear lesson of all history, and no amount of paper will suffice to change it. If the Empire emerges from the ordeal of

the next naval war with sea power undiminished, commerce will flourish with vigour unabated. If that sea power is ever lost, then is the Empire doomed. No naval supremacy can absolutely guarantee commerce from the risks of war, though it is easier—for Great Britain—to defend commerce now than in sailing days; but the issue of the war will determine the fate of her trade in the future as in the past. The greatest commercial nation of the world issues triumphant from a naval struggle. Its producing and manufacturing powers are unchanged. It can still build shipping at a speed unapproachable by any rival. Its seafaring population, its habits, its deeply rooted traditions remain the same. Yet, Mr. Bowles implies that some commercially far inferior Power will have absorbed and will permanently retain all its trade, under the malefic operation of a piece of paper. Is this really conceivable?

All unconsciously, and therefore so much the more effectively, Mr. Bowles has ranged himself on the side of national insurance. He has clearly indicated that there is nothing to fear except the underwriters. The Navy can protect our commerce if only our merchants and shipowners can be induced to trust to it. Insurance rates, not an enemy's cruisers, are to drive the trade of the Empire under an alien flag; unexplained forces are to keep it there. All is to be lost because of panic proceedings, whose efficacy is problematic, even if their practicability on a vast scale could be admitted.

The proposal which Sir G. Tryon urged exactly meets the exigencies of the case. A system of national insurance properly worked out would avert panic, and abate the unholy craving for an alien flag with which British shipowners are credited. The risks which the State would assume, will be greater or less according as the only real insurance of the Empire—the Navy—is worthily maintained, or culpably neglected. Given the strong Navy, the war risks to British vessels, navigated in accordance with directions issued by the naval Commanders-in-Chief, would

be a small burden to the State. Under such conditions, even the sailing trade would not wholly disappear in certain waters; but the immediate effect of war would be a great demand for new fast steamers, and the building yards of the United Kingdom could, under pressure, turn out one million tons of steam shipping in a year. The transfer of trade from sailing vessels to steamers, which is now steadily progressing, would be accelerated. The safety attained by fast steamers bridging the distance between zones swept by British cruisers would be so complete that an immediate stimulus would be given to shipbuilding and marine engineering. The great naval Power which can build the best steamers, at the least cost, in the shortest time, need not fear for the future of its carrying trade.

Mr. Haines treats the question of the danger of commerce in war from another standpoint. He rightly shows that the phrase "Privateering is and remains abolished," is practically worthless, and thus deals a side-blow at the Declaration of Paris. The armed mercantile steamer of to-day can be transferred into a legalized vessel of war by a stroke of the pen. The so-called "volunteer fleet" of Russia, and our own swift merchant ships now subsidized, can do all that was open to the privateer of old days, and then, as now, the advantage lies with the Power that can equip, man, maintain, and handle effectively the greatest number of such ships. The sole difference, under modern conditions, appears to be that, while the privateer looted for the profit of her owners, the auxiliary armed merchant steamer —call her what you will—will loot for the State, which, however, by means of the leverage offered by prize-money, can stimulate the energies of officers and crew to any extent that may be needed. The one necessary condition, now as always, is the power of bringing the captured vessel into port. Captain Semmes added nothing to the coffers of the Confederate States; but, as Mr. Haines points out, simply burned his prizes, after taking out such portions of their cargoes as served to supply his needs.

In his admirable work recently published, Captain Mahan clearly shows that the *guerre de course* can, in the long run, only pay the belligerent who possesses the greatest sea power. While a strong naval belligerent, possessing harbours all over the world, could effect captures, a weaker belligerent not so provided could only hope to destroy vessels and cargoes, and would frequently find much difficulty in disposing of the crews. Whatever the late Admiral Aube may have written, the sentiment of the civilized world will not now stand the deliberate cold-blooded murder of unresisting non-combatants. The killing of prisoners who do not attempt to escape, merely because they are an encumbrance, is not recognized as justifiable at the end of the nineteenth century.

The *rôle* of the commerce-destroyer is by no means free from difficulties. Suppose that half the cargo of a captured ship is the *bonâ fide* property of a formidable neutral; the captor may take her into port, if he can, and argue the matter. The neutral can then be eventually compensated, though if the early delivery of the goods is necessary to him, or if they are perishable, he will suffer almost as much as if they were destroyed. The point is, however: Will the captains of future *Alabamas* venture to destroy in such a case?

Mr. Haines appears to take international arrangements somewhat too seriously. *Inter arma silent leges* is a maxim which applies with peculiar force to international law. One law alone prevails in war, and that is to inflict the maximum injury on your enemy with the minimum cost and risk to yourself. There are thus only two practical limitations which control the operations of a belligerent. In the first place, he must not incur the moral reprobation of the civilized world by acts which, if he is the weaker Power, will justify tenfold reprisals, or, if he is the stronger Power, will, nevertheless, sooner or later avenge themselves. In the second place, he must not do anything calculated to array a strong neutral against him. Whatever, therefore, was sanctioned by the

rules of the naval manœuvres of 1888 and 1889, these two considerations will govern real war. And, without pausing to consider whether the bombardment of an undefended town is a sufficiently profitable undertaking to tempt a belligerent, it is at least clear that there is a wide moral distinction between such a bombardment, delivered after due warning, and the torpedoing of helpless merchant vessels without seeking to effect capture.

The broad issues of the naval wars of the future will be as were those of the past. As Carthage fell before the sea power of Rome, so, many hundred years later, fell Holland and Spain; so will fall Great Britain if her naval pre-eminence is lost.

"The one thing needful" for the safety of the Empire, and the protection of its commerce in war, is a strong Navy. Fleets maintained at a strength sufficient to meet all probable demands, and reserves ready to provide for rapid expansion on the outbreak of war, are the first necessities of our national existence. Given such fleets, a system of insurance such as Sir George Tryon advocated need involve no real burden upon the State, but would effectually check panic and gain time to make the sea power of Great Britain felt throughout the world.

G. S. C.

THE COMMAND OF THE SEA.*

THE objects of the Naval Manœuvres of 1893 were defined in the Official Programme to be "on the part of one side to obtain command of the sea between Great Britain and Ireland, and on the part of the other side to prevent this." The two sides were, for purposes of distinction, designated the Red and the Blue respectively, and it was to the Red side that was assigned the object of obtaining the command of the sea. What was meant by obtaining the command of the sea was further defined as follows:—"If the Blue side has either been defeated or has been compelled to retire to a distance to avoid an engagement, and the Blue torpedo-boats have been destroyed or reduced to inactivity, the Admiral of the Red side is to report by telegraph if he considers that his side has gained command of the sea so that a large expedition may be sent across it." Here we have a clear and authoritative definition of what is meant, in a strategic sense, by the command of the sea. No arbitrary claim to exercise "the dominion of the seas," such as England often advanced in bygone times, can give any assurance of holding the command of the sea in the proper strategic sense. The ships of a foreign Power might in former days be content, as a matter of courtesy, or even as a formal recognition of maritime supremacy, to lower their topsails in the narrow seas in the presence of a British man-of-war. But when any foreign Power felt

* *Quarterly Review*, October, 1893.

itself strong enough at sea to dispute the maritime supremacy of Great Britain, no formal claim to the dominion or sovereignty of the seas would avail to release Great Britain from the necessity of fighting to secure the command of the sea. In truth, England claimed the sovereignty of the seas long before she was strong enough to secure the command of the sea; and now that the command of the sea in the strategic sense is necessary to her existence as an Empire, she has long ago abandoned her former claim to the sovereignty of the seas.*

If then we desire clearly to understand what is meant by the command of the sea in a strategic sense, it is necessary first to dismiss from our minds all ideas associated with the sovereignty of the seas as formerly claimed by this country. There is very little relation between the two. Yet they have often been confounded by writers of repute. The utmost that can be said is that the one is symbolical of the other; that from the earliest times the claim of England to the sovereignty of the seas has been the formal and almost instinctive expression of the true conditions of national defence for an island situated like Great Britain. Selden, for example, in his "Mare Clausum," claims the dominion of the sea as an ancient and inseparable appendage to the ownership of the land of Britain; and he sets forth the limits of this dominion, of which the more important, for our purpose, are those which apply to what are called "the narrow seas." Over

* In fact, she did so precisely at the moment when the Battle of Trafalgar had, so far as the struggle with Napoleon was concerned, finally and decisively established her strategic command of the sea. "The Battle of Trafalgar having so completely humbled the naval power of France and Spain, suggested to the consideration of the Board of Admiralty, with the approbation of the Government, the omission of that arbitrary and offensive article, which required naval officers to demand the striking of the flag and lowering of the topsail from every foreign ship they might fall in with. That invidious assumption of a right, though submitted to generally by foreigners for some centuries, could not probably have been maintained much longer except at the cannon's mouth; and it was considered therefore that the proper time had come when it might, both morally and politically, be spontaneously abandoned.' ('Life of Earl Howe,' by Sir John Barrow, chap. vii. p. 200.)

these the British dominion is, according to Selden, complete, and extends to the east and north as far as the shores of the opposite European countries. Here we see the older and more conventional idea of the sovereignty of the sea gradually passing into the later and more scientific idea of the command of the sea. Great Britain is an island. Its foreign commerce must pass over the seas, and no enemy can reach it except by crossing the sea. There is no parallel to this in the history of the world. Great nations have risen by the power of the sea and have fallen again by the loss of it. But in all such cases sea power was an instrument of expansion, not, as in the case of England, a condition of existence. In modern times, as regards England, it has been both. But from the days when England first became a nation, sea power has been the indispensable condition of her existence, whereas it is only in comparatively modern times that it has become an instrument of her Imperial expansion. This indeed is the essential function discharged by sea power in the history of civilization. It transmutes a city or a nation into an Imperial dominion. "I cannot fiddle," said Themistocles, "but I can make a small town a great city." The means thereto was sea power. "Consilium Pompeii," says Cicero, "plane Themistocleum est; putat enim qui mari potitur eum rerum potiri." On this Bacon comments:—

"We see the great effects of battles by sea: the Battle of Actium decided the empire of the world; the Battle of Lepanto arrested the greatness of the Turk. . . . Thus much is certain: that he that commands the sea is at great liberty, and may take as much and as little of the war as he will; whereas those that be strongest by land are many times nevertheless in great straits. Surely at this day with us of Europe, the vantage of strength at sea (which is one of the principal dowries of this kingdom of Great Britain) is great; both because most of the kingdoms of Europe are not merely inland, but girt with the sea most part of their compass; and because the wealth of both Indies seems in great part but an accessory to the command of the seas."

Bacon here dwells upon the advantage of sea power,

upon its relation to "The True Greatness of Kingdoms and Estates," and this he does with rare insight and pregnancy. But he does not seize, or at any rate he does not press, the point that, whereas sea power is an advantage to all kingdoms capable of wielding it, it is only to a kingdom, and an empire situated as England and her Empire are situated, that it is an absolute necessity. Here then we see the true relation between the ancient sovereignty of the seas and the modern command of the sea. The sovereignty of the seas was the symbolical expression of England's insular position. The command of the sea is the strategic expression of England's Imperial expansion. Our ancestors knew that except by sea the enemies of England could never reach her. They knew also that her soil had never been invaded except when she was unable to overthrow her foes at sea. They never doubted the truth of what Raleigh puts so quaintly, and withal so forcibly, when he says, "To entertain those that shall assail us, with their own beef in their bellies, and before they eat of our Kentish capons, I take to be the wisest way." All this they expressed in their claim to the sovereignty of the seas. We express the same idea in a different way when we insist that the existence of the Empire depends on the capacity of England to secure and maintain the command of the sea. The difference is that the sovereignty of the sea was a continuing claim, always symbolically asserted in the time of peace, but not always strategically sustained in time of war; whereas the command of the sea is purely a strategic conception, dormant and inoperative in time of peace, but acquiring a vital meaning the moment war is declared.

What is this meaning? The command of the sea means freedom of military transit in the first place, of commercial transit in the second. The latter is implied in the former as the greater includes the less. Freedom of commercial transit can never be more than precarious until freedom of military transit has been secured, and when that is

secured commercial transit becomes as free as is compatible with a condition of maritime war. Hence it is strictly true to say that command of the sea means freedom of military transit, or, in still more general terms, strategic freedom of transit. The sea in itself is a barren territory. It is not coveted for itself by any Power, civilized or uncivilized. Its only commercial or economic value is that of its fisheries, and these belong for the most part to its territorial regions, and not to its broad strategic expanse. But the political and strategic value of the sea is its value as a highway. If it could not be traversed by ships, no Power would seek to command it. If it could not be traversed by British ships, the British Empire would cease to exist.

Furthermore, for the British Empire to continue to exist not only must the sea be traversed by British ships, but in time of war it must be commanded by British ships. Strategic freedom of transit must be secured in order that commercial freedom of transit may be maintained. For England to surrender the command of the sea in time of war would mean two things. It would mean on the one hand that England itself was liable to invasion, and on the other that every transmarine portion of the British Empire was open to military assault; and as a consequence of this it would mean further that the maritime commerce of the Empire had ceased to exist. No other great Power of the world is exposed in the same degree to these extreme consequences. To any other Power the obtaining of the command of the sea as against England can only be a means to an end, that end being the overthrow of the British Empire. To England it is and must be an end in itself, that end being the highest of all political ends for a nation; namely, the maintenance of the national existence. If we lost the command of the sea beyond recovery, we might not be immediately invaded, but the bonds of Empire would *ipso facto* be sundered. We might avert invasion by concession; but assuredly no concession short of a dismemberment, or even a

dissolution of the Empire, would satisfy an enemy who had finally vanquished us at sea. It is thus no rhetorical expression, but a plain statement of essential fact, that by the Navy we must stand or fall. To all other Powers a strong navy is more or less of a luxury, useful for certain subordinate purposes, the chief of which is to act as a counterpoise to the maritime supremacy of England. To England alone, it is from the very nature of the case an absolute and primordial necessity. If no other nation maintained a single warship at sea, England must still hold sufficient command of the sea to secure the communications of the Empire. That condition being satisfied, the superior limit of the naval strength necessary to her security is determined from time to time by the naval strength of her neighbours and possible enemies. Its inferior limit is determined once for all, independently of all comparison with foreign Powers, by the insular position of the kingdom and the world-wide character of the Empire.

Having thus shown that command of the sea means strategic freedom of maritime transit, military and commercial, we may next consider how such freedom is to be secured and maintained. We saw in the programme of the Manœuvres of 1893 that the criterion of command of the sea was held to be the practicability of sending a large expedition across it. Before he was empowered to report that he had gained the command of the sea in this sense, the Red Admiral was required either to have defeated the Blue fleets or to have compelled them to retire to a distance to avoid an engagement, and to have destroyed the Blue torpedo-boats, or at least to have reduced them to inactivity. In other words, the command of the sea is in this case taken to mean the destruction, or at least the complete neutralization, of any organized naval force capable of interfering with an enemy's freedom of transit. This is the true and only legitimate sense of the words. In no other way is it possible to establish that strategic freedom of maritime transit which is the final

cause of all naval warfare. As a matter of fact, for reasons which need not be examined here, the Red Admiral never gained command of the Irish Channel in this sense. At no time during the period of "hostilities" would it have been possible for a large expedition to be sent across from England to Ireland in the conditions assumed to be prevailing, of war between the two countries, the shores of Ireland being guarded by a powerful and undefeated fleet. On the contrary, so far from the Red Admiral being able to report that he had gained the command of the sea, he was not even able to prevent the Blue Admiral from claiming the exact reverse. Having swept the Irish Channel from end to end without encountering the main force of his adversary, Admiral Fitzroy, in command of the Blue fleets, telegraphed to the Admiralty in the following terms—"I consider that I have command of the Irish Sea, and that no expedition can cross it." With all respect for the memory of a very distinguished naval officer, we must express the opinion that this was a gratuitous misreading of a very important principle of naval warfare. It confounded the condition of a disputed command with that of an assured command of the sea. It is true that the Red Admiral was not in a position to defeat the Blue fleets, nor to compel them to retire to a distance in order to avoid an engagement. So far he himself had failed to secure the command of the sea, and assuredly in such circumstances no expedition could have been sent across it. The latter part of Admiral Fitzroy's telegram was therefore perfectly correct; but, except in this sense, he had no more secured the command of the sea than his adversary had. He had denied to his adversary that strategic freedom of transit which constitutes command of the sea, but he had failed to secure it for himself. He had not defeated the Red fleets, nor compelled them to retire to a distance in order to avoid an engagement; and this criterion, applied by the Admiralty to the Red fleets, applied with equal force to his own. The very circumstances which made it impossible for the Red side to send an expedition across the

Irish Sea would have made it equally impossible for the Blue side to send an expedition across in the opposite direction, or to carry out any important naval enterprise against the territory of its adversary. The presence on either side of an undefeated naval force within striking distance rendered the despatch of any such expedition reciprocally impossible. There was no command of the sea on either side, but the exact negation of it on both sides.

This point will well repay further examination and elucidation. It raises the most fundamental issue of all naval warfare. When we say that England must secure the command of the sea, we do not merely mean that she must render invasion impossible. That is only the negative side of the matter. The positive side is that she must secure her own freedom of maritime transit. In truth, no command of the sea is necessary to secure immunity from invasion. That is secured by the mere existence of the British fleets so long as they are undefeated. But their mere existence, even in what Raleigh calls "equal or answerable strength" to the fleets of an enemy, does not confer upon them the command of the sea. It is certain that no invasion of these islands will ever be attempted until the fleets which defend them have first been defeated and virtually destroyed. It will not suffice merely to "decoy" them away, as some people think was done when Nelson followed Villeneuve to the West Indies. No capable commander would allow himself to be "decoyed" away, and no fleet could be decoyed away to such a distance that it would be impossible for it to return in time to frustrate the invader's purpose. Napoleon knew this perfectly well, deficient as he was in many respects in what a French naval historian has called *le sentiment exact des difficultés de la marine.* He never pretended to think that his scheme of invasion was rendered feasible by the fact that Nelson had followed Villeneuve to the West Indies. Nelson, he knew, was away, but he did not know at what moment he might return. But if Nelson had encountered Villeneuve across the Atlantic and there

suffered irretrievable defeat, and if, at the same time, Ganteaume had been able to fight and beat Cornwallis off Brest, then, and not till then, might the Boulogne expedition have been launched with some prospects of success. But Villeneuve, closely followed by Nelson, returned across the Atlantic, and finally put into Cadiz without striking the decisive blow. Then Napoleon knew that his scheme of invasion had failed, because it was no longer possible for him to secure that strategic freedom of transit which was indispensable to its success. Accordingly, two months before the Battle of Trafalgar was fought, he turned his arms against Austria, and abandoned once for all his plans for the invasion of England.

Here we see once more, in the light of the last great naval crisis of our history, what is really meant by the command of the sea. The command of the sea was necessary to the success of Napoleon's designs, and because he failed to secure it his designs were irretrievably frustrated. The history of the Armada and its defeat teaches exactly the same lesson. An invincible fleet was to overpower the British naval defence, and to cover the descent upon our shores of Spanish troops massed in Flanders for the purpose. But the Armada was defeated, and the contemplated invasion was thereby rendered impossible; and generally it may be asserted, without fear of contradiction, that no military enterprise across the sea is practicable until complete command of the sea has first been secured by the defeat or disablement of all organized naval force capable of disputing the passage.

We are now in a position to determine whether Admiral Fitzroy was justified in stating that he had gained the command of the Irish Channel. Assuredly he was not. There is no such thing as a partial or incomplete command of the sea; it is either absolute, or it does not exist. An Admiral who commands a fleet strategically at large, even though it is inferior to its immediate adversary, can always frustrate a serious territorial attack on the country he serves, so long as he has not himself been defeated. But he has

no command of the sea himself until he has defeated or disabled the naval forces of his enemy. The annals of naval warfare abound in illustrations of this paramount and fundamental principle. Two such illustrations, those of the Armada and of Napoleon's projected invasion of England, have already been incidentally mentioned. Napoleon's invasion of Egypt and the disastrous enterprise of Persano at Lissa are two other cases in point. The command of the sea is what every naval Power must aim at in all naval operations which are not purely defensive; and no Power can defend any of its transmarine possessions, except so far as they are capable of local defence, against an adversary who holds the command of the sea.

The history of these islands presents two noteworthy cases, in one of which the principle here represented as indefeasible would appear to have been successfully defied, while in the other it was certainly misapprehended by those who directed the defence of the kingdom. Each of these cases will repay a somewhat close examination. The first is the recovery of Britain for the Roman Empire by Constantius, at the close of the third century, after the revolt and death of Carausius. The other is the Battle of Beachy Head and the strategic situation involved in it, which has been so curiously misapprehended by nearly all historians, and has even baffled the sagacity of such a master of the philosophy of naval warfare as Captain Mahan. By making himself master of the Roman fleet, collected at Boulogne for the chastisement of German pirates, Carausius, a daring but treacherous seaman, succeeded in wresting Britain from the Roman Empire, and governed it for ten years as an independent dominion. More than one attempt was made by Rome to overthrow the usurper and recover his dominions for the Empire; but for a long time he held Boulogne, and once at least he defeated a Roman fleet at sea. Finally he was murdered by his minister Allectus; "and the assassin," says Gibbon—

"succeeded to his power and his danger. But he possessed not equal abilities either to exercise the one, or to repel the other.

He beheld with anxious terror the opposite shores of the continent, already filled with arms, with troops, and with vessels; for Constantius had very prudently divided his forces, that he might likewise divide the attention and resistance of the enemy. The attack was at length made by the principal squadron, which, under the command of the Prefect Asclepiodotus, an officer of distinguished merit, had been assembled at the mouth of the Seine. So imperfect in those times was the art of navigation, that orators have celebrated the daring courage of the Romans who ventured to set sail with a side wind, and on a stormy day. The weather proved favourable to their enterprise. Under the cover of a thick fog they escaped the fleet of Allectus, which had been stationed off the Isle of Wight to receive them, landed in safety on some part of the western coast, and convinced the Britons that a superiority of naval strength will not always protect their country from foreign invasion."

This reads, at first sight, like a direct negation of the principle which we have represented as indefeasible, the principle that the command of the sea is an indispensable condition of successful territorial attack. But the story told by Gibbon appears to be incomplete, and its incompleteness goes far to vitiate the historian's comment upon it. In the first place, it is plain that, whatever may have been the case with Carausius, Allectus, his murderer and successor, was regarded by the people of Britain as a mere usurper. There is no evidence that he inspired any impulse of national defence, or that even his Roman subjects were faithful to him. In the second place, Gibbon tells us nothing of what became of the superior fleet of Allectus which Asclepiodotus is represented as successfully evading. It appears to have vanished out of existence, and probably after the death of Allectus, who was defeated and slain in an engagement with the troops of Asclepiodotus, either it was disbanded or it returned to its Roman allegiance. At any rate, it does not appear to have attempted to dispute the passage of Constantius, who set out from Boulogne as soon as he heard of the victory of Asclepiodotus and the death of Allectus. "When Constantius landed on the shores of Kent," says the historian, "he found them covered with obedient subjects. Their acclamations were

loud and unanimous, and the virtues of the conqueror may induce us to believe that they sincerely rejoiced in a revolution which, after a separation of ten years, restored Britain to the body of the Roman Empire."

We are accordingly by no means disposed to admit that the success of Asclepiodotus and the recovery of Britain by the Roman arms were calculated to convince the Britons, then or thereafter, "that a superiority of naval strength will not always protect their country from a foreign invasion." The fleet which failed to protect them was not a national fleet, but a revolted fleet of their conquerors which probably shared their own antipathy to Allectus, and the so-called "foreign invasion" was manifestly regarded by many of them as a not unwelcome return of rulers whom they were prepared to obey. In other words, Asclepiodotus, though he had not defeated the fleet of Allectus, had for all practical purposes secured the command of the sea. In truth, the whole history of the revolt of Carausius, and its sequel in the overthrow of Allectus, is a signal illustration of the strategic advantage which belongs to command of the sea. Carausius, having first made himself master of the Roman fleet which commanded the Channel, had no difficulty whatever in making himself master of Britain. There he defied the whole power of the Roman Empire until the Romans had constructed a fresh fleet capable of wresting the command of the Channel from the usurper himself, or from his successor. It is true that Asclepiodotus succeeded in landing his troops in Britain without first disposing of the fleet of Allectus; but that the fleet of Allectus was in the end effectually disposed of is proved by the unmolested transit of Constantius, and his complete success in re-establishing the sway of Rome throughout the land.

We turn now to a period of the national history just fourteen centuries later than that which has just engaged our attention. Once in the intervening period was England successfully invaded by William the Conqueror, and once

was a threatened conquest averted by the failure of the Spanish Armada to secure the necessary command of the sea. The strategic conditions involved in the defeat of the Armada have already been incidentally noted, and it would not be uninteresting, if space permitted, to consider at some length why it was that William the Conqueror succeeded where the Spanish monarch failed.* But we pass over these cases in order to examine in detail an episode in our naval history which illustrates more than any other the signal failure of our country's historians to appreciate maritime affairs. The Battle of Beachy Head fought on June 30, 1690, by the English and Dutch fleets under Torrington and Evertsen respectively against a superior French fleet under Tourville, has commonly been represented by historians as one of the most disastrous and even disgraceful events in all the annals of the British Navy. "There has scarcely ever been so sad a day in London," writes Macaulay, "as that on which the news of the Battle of Beachy Head arrived. The shame was insupportable; the peril was imminent." In truth, the shame was great; but it was, or should have been, that of those who, at a great crisis in the national fortunes, had not provided the nation's defenders at sea with a force sufficient to overcome the forces of the enemy. It was not that of the great strategist who saved his country by the sacrifice of his own immediate reputation, and at the risk of going down to posterity as a mere incapable, if not as a traitor and a poltroon. The peril was imminent; but if Torrington had listened to the politicians who controlled him and not to his own masterly strategic instincts, the case might have been one, not of imminent peril, but of irretrievable disaster. Torrington, in fact, displayed the rare fortitude of a

* "The invaders crossed an undefended sea, and found an undefended coast." This was because, as the same writer says, "a formidable English fleet, which by King Harold's orders had been cruising in the Channel to intercept the Normans, had been obliged to disperse temporarily for the purpose of refitting and taking in fresh stores of provisions." (Creasy, "Fifteen Decisive Battles.") Practically, therefore, the defending fleet was non-existent at the time of the Norman Conquest.

Fabius, '*Unus qui nobis cunctando restituit rem.*' Victory was impossible to him, and his sense of duty forbade him to seek a glorious death and an undying fame in defeat. He so fought as to save his country and to ruin his own reputation. Public opinion clamoured for his life, and insisted on his being sent to the Tower. William III., who was doubly indebted to him for his crown and his throne, cashiered him from the naval service, refused to listen to his defence, visited several members of the court-martial which tried and acquitted him with heavy pains and penalties, and broke no less than forty-two officers of the Navy, who, as Entick puts it, "appeared to justify the Earl's courage and conduct." The utmost that the great Whig historian can find to say in his favour is that—

> "there is a higher courage of which Torrington was wholly destitute. He shrank from all responsibility, from the responsibility of fighting, and from the responsibility of not fighting; and he succeeded in finding out a middle way which united all the inconveniences which he wished to avoid. He would conform to the letter of his instructions; yet he would not put everything to hazard. Some of his ships should skirmish with the enemy; but the great body of his fleet should not be risked."

All this is true; but the high strategic reasons which governed Torrington's conduct are entirely ignored by the historian. Let us closely consider the situation. The country was divided between the partisans of James and the supporters of William. James was in Ireland, where his strength was greatest, and William had gone thither to encounter him, his transit having been covered by a small squadron of six men-of-war in St. George's Channel under the command of Sir Cloudesley Shovel. The central Government was vested in Mary as Regent, assisted by a council of nine, among whom was Nottingham, Torrington's personal enemy, and Russell, his professional rival. The army was with William in Ireland, and Great Britain could only be defended on land by a hastily levied militia. Its sole effective defence was, as always, the fleet; and the fleet was, for the moment, insufficient to defend it. The

chief reliance of James was upon the friendship and the forces, naval and military, of Louis XIV. Here was a case in which, beyond all others, the security of England against insurrection at home and invasion from abroad depended on the sufficiency and capacity of her fleets to maintain the command of the sea. Louis XIV. resolved to make a determined effort to wrest this command from his hated adversaries, and by overpowering the English fleet in the Channel to open the way for a successful invasion and a successful insurrection to follow. A great fleet was collected at Brest under the supreme command of Tourville, and a squadron from Toulon under Château-Renaud was ordered to join him in the Channel. The intention was to sweep the Channel, to threaten London, so as to foment a Jacobite insurrection in the capital, to land troops in Torbay, and to occupy the Irish Channel in such force as to prevent the return of William and his army.

All this might have been foreseen, and indeed was foreseen by Torrington if by no one else, and, being foreseen, the whole scheme might have been frustrated by naval preparations equal to the emergency. In those days ships were so ill-built that fleets could not keep the sea in the winter; but the designs of Louis were known and foreseen in the preceding winter, when there would still have been time to take measures for defeating them. Torrington himself had foreseen the emergency, and entreated those responsible for the strength of the Navy to provide adequately against it. Up to the preceding autumn he had himself been First Commissioner of the Admiralty; but he surrendered his post, accepting a command afloat, rather than remain responsible for a state of things of which he clearly saw the danger. Macaulay represents him as having been dismissed as a consequence of an inquiry into the administration of his office, which resulted in the discovery of gross corruption and malversation:—

"No censure was passed on the chief offender, Torrington; nor does it appear that a single voice was raised against him.

He had personal friends in both parties. He had many popular qualities. Even his vices were not those which excite public hatred. The people readily forgave a courageous open-handed sailor for being too fond of his bottle, his boon companions, and his mistresses, and did not sufficiently consider how great must be the perils of a country of which the safety depends on a man sunk in indolence, stupefied by wine, enervated by licentiousness, ruined by prodigality, and enslaved by sycophants and harlots."

These are the florid colours with which Macaulay loads his palette. This is the portrait he draws of the man whom his countrymen down to the time of the Battle of Beachy Head continued to regard as the most capable seaman of his time, and whom his brother officers acquitted after the battle, even in the teeth of an exasperated and vindictive public opinion. It does not seem to have occurred to the historian that Torrington may have escaped censure because he was not to blame. It is true that he was removed from the Admiralty, and his namesake and kinsman, Thomas Herbert, Earl of Pembroke, was appointed in his place. But this seems to have been done at his own urgent request, and for reasons entirely to his credit. He urged upon the Government that the preparations they proposed to make for meeting the expected attack of the French fleet were in his judgment insufficient; and finding his remonstrances unheeded, he declined to be responsible for a naval policy which he could not approve. The abuses discovered in the administration of the Admiralty do not seem to have been laid to his personal charge; and though it was deemed expedient to appoint a new Commission in which he had no place, he was immediately entrusted with the chief command at sea. "Though he had been found an incapable administrator," says Macaulay, "he still stood so high in general estimation as a seaman that the Government was unwilling to lose his services. He was assured that no slight was intended to him. . . . In an evil hour for England, he consented to remain at the head of the naval force on which the safety of our coasts depended."

So history is written. Yet a consideration of facts and

dates seems to afford a strong presumption that Torrington could, in any case, have been only technically responsible for the abuses discovered at the Admiralty. The Board of Admiralty was only constituted at the beginning of 1689, and the date of the *Gazette* which contains the names of Torrington's colleagues is given by Macaulay as March 11. Early in April, or possibly before the end of March, Herbert, who was only created Earl of Torrington later in the year, was at sea with the fleet, arriving before Cork on April 17. He remained at sea, or at least in command of the fleet, until the end of August, when the fleet under his command was broken up for the winter. It was the bad victualling of this fleet which led to an inquiry, and it was on November 23 that the House of Commons, having by that time been informed of the result of the inquiry, which had been conducted by the King in person at the Treasury, ordered the persons directly incriminated into the custody of the Serjeant-at-Arms. Shortly after this a new Board of Admiralty was appointed, Torrington being superseded by Pembroke. It is hard to believe that Torrington, who was at sea almost continually from the time of his appointment at the Admiralty until the time when the inquiry was instituted, who must himself have furnished many of the grounds and materials for the inquiry, who was prematurely driven into winter-quarters in August because he was, as Entick says, "in very bad want of beer," * could ever have had any opportunity during his brief and interrupted term of office of showing whether he was a capable or an incapable administrator.

The presumption here suggested is converted into something like a certainty by Torrington's own words in his

* The mention of beer is not without interest. It was almost the only beverage which the seamen of the time and for long afterwards could get at sea. The means of storing water were so inadequate that it was generally undrinkable after a few days at sea, and beer was issued in place of it, being also regarded as a preventive of scurvy in the days before limejuice was obtainable. Lord Hawke's "Memoirs" are full of references to beer, and of complaints of the quality of the beer supplied to the service in his time.

defence before the court-martial. He had repeatedly urged on Nottingham, the Secretary of State, that the fleet should be strengthened in view of the threatened attack of the French. Earlier, in the year 1690, a French fleet had appeared off Cork, and, had Torrington's warnings been heeded betimes, an English fleet should have been in a position to attack and destroy it, and thereby entirely to frustrate the subsequent enterprise of Tourville. On this Torrington remarks in his defence:—

"The late insult which some call a disgrace had not only been prevented, but the French put by the possibility, during the whole war, of setting any fleet to sea considerable enough to give us either care or trouble. What excuse can be made for it I do not well know; but I am sure it is not want of admonition: for I appeal to many concerned in it whether it was not foreseen and foretold several months before the descent of the French, and the time it was made. Lest any of these matters should be laid to my charge, I think it necessary to acquaint this honourable Court, that not seeing matters go so well in the Admiralty as I thought the service required, and that it was not in my power to prevent it, I humbly begged and obtained the King's leave to be dismissed from that Commission, and giving any further attendance at the Board; that since I could not prevent the mischief I might have no share in the blame. . . . I am sure the noble Lord [Nottingham], whose province it is, has always by his discourse endeavoured to persuade me to a belief that the French would not come out with a considerable strength. And I appeal to him, whether I did not tell him, when I had urged many reasons for strengthening our fleet, which he only answered with 'You will be strong enough for the French;' 'My Lord, I know my business, and will do my best with what I have; but pray remember it is not my fault that the fleet is not stronger. I own I am afraid now in winter, whilst the danger may be remedied; and you will be afraid in summer when it is past remedy.' I could say more upon this subject, had I not confined myself to this year."

It appears from this that Torrington himself asked to be dismissed from the Board of Admiralty, not because he acknowledged his responsibility for administrative crimes, with which he could have had very little to do, and from which he personally suffered, but because he would not be responsible for a state of things which he regarded as

menacing to the security of the kingdom. "I know my business, and will do my best with what I have"—there spoke the true spirit of the British Navy. "You will be strong enough for the French"—there spoke the light heart of the British politician. The seaman was right, and the minister was wrong. But it was the seaman who was punished for strategy which saved the kingdom, while the minister, whose counsel would have lost it, has ever since remained in possession of the ear of history.

However, Torrington had to make the best of a situation of which he had foreseen and deplored the perils. Let us see how he did it. Early in the year a fleet of sixteen sail-of-the-line under Admiral Killigrew had been sent in charge of a convoy to Cadiz, with orders to prevent, if possible, the exit of the Toulon fleet from the Mediterranean, and to follow it up should it effect its escape. This was good strategy in the abstract, but questionable in view of the comparative weakness of the English fleet. In its consequences it was disastrous, for Killigrew, delayed by weather, and by the many pre-occupations, commercial and strategic, involved in his instructions, was unable either to bar the passage of the Toulon fleet or to keep in strategic touch with it during its progress towards the Channel. Hence Château-Renaud was able to effect his junction with Tourville unmolested; while Killigrew did not reach Plymouth until after the Battle of Beachy Head had been fought, when, the French fleet being temporarily supreme in the Channel, he was compelled to carry his squadron into the Hamoaze so as to be out of harm's way. The only other important British force afloat was Sir Cloudesley Shovel's squadron, which had escorted the King to Ireland, and, having done so, received orders to join Torrington. But Tourville, being by this time in the Channel, was gradually forcing Torrington to the eastward. Hence, although fully alive to the strategic value, in certain contingencies, of these outlying squadrons of Killigrew and Shovel, Torrington was compelled to rely mainly on the force under his immediate command, the insufficiency

of which he had many months before pointed out and strenuously insisted upon.

The great but inadequate fleet which Torrington was to command was slowly assembled in the Downs, and Torrington joined it on May 30, his instructions having been signed on the 26th, and delivered to him on the 29th.* Even then the Dutch fleet had not reached the rendezvous in the numbers promised; and more than three weeks later, when Torrington, who had by this time carried his fleet to St. Helen's, wrote to Nottingham, on June 23, to announce Tourville's advance, he said, "We have but eighteen Dutch with us, after all De Witt's great promises." The entrance to the Channel was totally unguarded, and no scouts had been sent out to the westward. But this, though attributed to Torrington as a gross piece of neglect, was not his fault. His ships, insufficient in numbers at the best, were otherwise employed; and the Dutch, to whom he had entrusted the duty of scouting, had neglected it. Hence, on June 23, the first certain intelligence he received of the advance of the French was the information that they were anchored in great force in Compton Bay on the western side of the Isle of Wight. Three days afterwards, on June 26, he wrote to Nottingham to report that, his force having been strengthened in the meanwhile by the arrival of Evertsen with a reinforcement of Dutch ships, he, with fifty-five men-of-war and twenty fireships, had attempted to bring the French to an action, but that the French Admiral, though superior in force, had declined the engagement. Torrington very soon perceived that his tactics, in thus seeking to take the offensive, were ill-judged and based on a mistaken estimate of the enemy's force; and he lost no time in summoning a council of war and deciding on a more prudent line of action. He was face to face with a hostile force so superior to his own that he could not

* These dates are important, because one of the charges made against Torrington was that he delayed to assume the command. "I was," he says, "commanded to stay for my instructions."

hope to win a decisive action. He might fight and be beaten, but he knew that to be beaten in such circumstances was not merely to lose a battle, but to imperil the safety of the kingdom and the stability of the throne. Hence he decided, in unanimous concert with his colleagues, English and Dutch, of flag-rank, to act on the defensive. A defensive strategy is not congenial to English naval traditions, nor easily rendered intelligible to a nation accustomed to assert its undisputed supremacy at sea. But in the circumstances in which Torrington found himself, by no fault of his own and in spite of his repeated warnings, it was the only strategy capable of retrieving an almost desperate situation. No more masterly exposition of the true principles and bearings of such a strategy has ever been penned than Torrington hastily jotted down in his immortal despatch to Nottingham on June 26, 1690:—

"I do acknowledge my first intention of attacking them a rashness that will admit of no better excuse than that, though I did believe them stronger than we are, I did not believe it to so great a degree. . . . Their great strength and caution have put soberer thoughts into my head, and have made me very heartily give God thanks they declined the battle yesterday; and indeed I shall not think myself very unhappy, if I can get rid of them without fighting, unless it may be upon equaller terms than for the present I can see any prospect of. I find I am not the only man of that opinion; for a council of war I called this morning unanimously agreed, we are by all manner of means to shun fighting with them, especially if they have the wind of us; and retire, if we cannot avoid it otherwise, even to the Gunfleet, the only place we can with any manner of probability make our party good with them in the condition we are in. We have now had a pretty good view of their fleet, which consists of near if not quite eighty men-of-war fit to lie in a line and thirty fireships; a strength that puts me besides hopes of success, if we should fight, and really may not only endanger the losing of the fleet, but at least the quiet of our country too; for if we are beaten, they, being absolute masters of the sea, will be at great liberty of doing many things they dare not attempt while we observe them, and are in a possibility of joining Vice-Admiral Killigrew, and our ships to the westward. If I find a possibility, I will get by them to the westward to join those ships; if not, I mean to follow the result of the

council of war. In the mean time I wish there might be speedy orders given to fit out with speed whatever ships of war are in the river of Chatham; and that the ships to the westward proceed to Portsmouth; and from thence, if the French come before the river, they may join us over the flats. This is the best advice I can give; but had I been believed in the winter, the kingdom had not received this insult."

So wrote the greatest seaman of his age, with a sagacity fully worthy of his consummate seamanship. The politicians in London, however, could not see the matter with his eyes. They persuaded themselves, and, still worse, they persuaded the Queen, that the French fleet which Torrington had reckoned as numbering at least eighty line-of-battle ships had not really "above sixty ships that could stand in a line." They insisted that a battle was necessary, and seemed to think that a victory was possible. They would not see that a defeat would be fatal. Torrington had declared that he meant to watch the French without fighting them—indeed, "by all manner of means to shun fighting with them;" to get by them to the westward, and join the British ships in that quarter, if possible; but to observe them always, and "retire, if we cannot avoid it otherwise, even to the Gunfleet,* the only place we can with any manner of probability make our party good with them in the condition we are in." These are the true principles of a waiting, observing, defensive strategy. But the Queen and her Council in London would not hear of them. Some of them were for superseding Torrington. All were for insisting that a battle should be fought at once, and Torrington's plan of retiring, "even to the Gunfleet" if necessary, was peremptorily negatived. "So that upon the whole," wrote Nottingham in a despatch, so hastily written that he had no time to take a copy of it—

"if you should retire to the Gunfleet, the ships from Plymouth,

* The Gunfleet is an outlying bank off the coast of Essex, north of the Thames. In Torrington's days a large fleet could anchor in safety behind it. But the shifting of the sandbanks has now somewhat diminished its value as an anchorage.

if not joined with you, and Sir Cloudesley Shovel, and all the ships returning from Ireland, and Vice-Admiral Killigrew with that squadron, and a rich fleet of merchantmen will all be exposed to inevitable ruin. And, besides, the French may have opportunity of going with their whole fleet, or sending such part as they think fit to Scotland, where they are expected; and we have too good reasons to apprehend disturbances."

With this amazing despatch was enclosed a peremptory order from the Queen to fight at the first opportunity:—

"We apprehend," Mary is made to say, "the consequences of your retiring to the Gunfleet to be so fatal, that we choose rather you should, upon any advantage of the wind, give battle to the enemy than retreat further than is necessary to get an advantage upon the enemy. But in case you find it necessary to go to the westward of the French fleet, in order to the better joining of our ships from Plymouth or any others coming from the westward, we leave it to your discretion, so as you by no means ever lose sight of the French fleet whereby they may have opportunities of making attempts upon the shore, or in the rivers of Medway or Thames, or get away without fighting."

Between Torrington's despatch, and the despatches of Mary and Nottingham in reply, there lies, as it seems to us, the whole right and wrong of naval strategy, the whole essence of what pertains to the command of the sea. On this point we can appeal, not indeed to Captain Mahan, the greatest living authority on naval history, and one of the greatest authorities of all time on the broader issues of naval strategy—for Captain Mahan appears in this case to have taken his history from Macaulay and Macaulay's authorities, and never to have examined Torrington's own defence—but to an authority not unworthy to be ranked with Captain Mahan, that of Admiral Colomb, whose work on "Naval Warfare" stands almost alone in our literature for its firm grasp of sound principle and its lucid exposition of illustrative fact. The following is Admiral Colomb's comment on Nottingham's despatch and its enclosure:—

"This would be a perverse enough misunderstanding of the situation and of Torrington's view of it, if it stood alone. But the *non-sequitur* of the enclosure almost takes one's breath away.

Nottingham was in the main only repeating what Torrington had put in his mind, but with the inferences turned inside out. The importance of joining, or at least of securing the safety of Killigrew and Shovel, was the matter which dwelt in the foremost place in Torrington's mind, and his main effort, as sketched out, was the endeavour to join them. If he could not pass the French to the westward, but could keep in observation of them to the eastward, his colleagues would be safe enough. For if de Tourville should go west after them, Torrington would follow them up; if he should detach force sufficient for their destruction, he would weaken himself so much that Torrington might engage him at an advantage. It was just the same with regard to Scotland. If Torrington was forced back—in order to avoid a battle—to the Gunfleet, the French could neither proceed to Scotland in full force nor send a detachment there. First, because they would be unable to shake off Torrington; and secondly, because if they weakened themselves by detaching, Torrington would fall on the remainder. The one thing certain, both from Torrington's words and Nottingham's, was that the French wished of all things for a general action with the odds in their favour, and this alone was sufficient to prescribe a refusal. The one point on which Nottingham could hang a grain of justification for the extraordinary enclosure which his letter contained, was his estimate of the relative forces watching each other. He assumed them nearly equal. Torrington and his brother Admirals, looking at both fleets when they so decided, were of opinion that the odds were too great to give reasonable hopes of success. What right had any statesman or politician in London to treat as fallacious estimates of force so arrived at? But Nottingham did it; for his letter, written in such haste that he was unable to take a copy of it, enclosed a positive order from the Queen to Torrington to bring the French fleet to action."

Then, after quoting Mary's order, the Admiral continues—

"This order was, of course, Nottingham's, and its wrong-headedness may possibly show itself to the reader who has followed me thus far. There is no sign in it of an understanding of the possibly overwhelming consequences of a lost battle, for it assumes it to be a bad thing to let the French 'get away without fighting.' Nottingham must have got it into his mind, and carried it into the mind of the Queen and her Council, that the well-tried Herbert and his colleague flag-officers were incompetent cowards, fearing a battle where there were at least fair chances of success, and nothing to follow defeat if it should come. But, as has often happened since, the statesman was found on

the quarter-deck, and the rash blunderer at the seat of Government. There was absolutely nothing to be gained by a battle which could not possibly be a decisive victory, and over which from the great numbers engaged, and the limits placed on manœuvring by the character of the ships and the lightness of the wind, the Admirals could have no real control. A complete victory to the enemy, on the other hand, would, at the very least, have sent the Dutch king back to Holland, if it did not place this kingdom under the orders of the Pope and of Louis. The sailors saw it all well enough. The statesmen neither saw it then nor afterwards."

By the time the Queen's commands reached him, Torrington, avoiding an engagement, had been forced back by the French to the neighbourhood of Beachy Head. He replied at once to Nottingham, and briefly recapitulated his former reasoning; but with a true sailor's sense of discipline, he expressed his readiness to obey the orders given him. He insisted that he and his colleagues had rightly estimated the strength of the French, and urged that their tactics showed them to be conscious of their advantage.

"If they do not think they have the advantage, I am yet to learn what can move them to stay, having for several days had a fair wind to take them off. And, my Lord, notwithstanding your advice from France, I take them to be eighty men-of-war strong. . . . I cannot comprehend that Killigrew, the merchant ships, Shovel, or the Plymouth ships, can run much hazard if they take any care of themselves; for, whilst we observe the French, they cannot make any attempt either upon ships or shore, without running a great hazard; and if we are beaten, all is exposed to their mercy. 'Tis very possible I reason wrong, but I do assure you I can and will obey. Pray God direct all for the best."

At daybreak on the morning after receiving his orders, Torrington drew his ships into line, the wind being light from the eastward; at eight o'clock he made the signal for battle, the French fleet being at the time to leeward and awaiting the attack. The Dutch fleet occupied the van; Torrington commanded the centre, according to usage; and Delaval, his second in command, who afterwards

presided at the court-martial which tried and acquitted his chief, commanded the rear. The tactics of the battle, which have been much criticised, only concern us here so far as they illustrate the strategic policy of Torrington. The Dutch from their position suffered most heavily, and this was subsequently made one of the grounds of accusation against Torrington, who was charged with not having duly supported his allies. But Torrington's object was to fight an action and not to suffer defeat. His orders, which were contrary to his own judgment, compelled him to fight, but they could not compel him so to fight as to lose his fleet. Had he seen his way to a decisive victory, he would have fought in a different fashion. There would have been no Battle of Beachy Head, for the French would have been destroyed before ever they weathered the Isle of Wight. Had the Queen's orders permitted him to avoid an action, in accordance with his own judgment and that of his colleagues, he never would have fought at all. As it was, all he could do was to fight so as not to be beaten, and this he did, although some of the ships under his command, especially those of the Dutch, were severely handled by the superior numbers of the French and their well directed fire.

"I am sure," he said in his defence, "that if I had acted otherwise than I did, the whole fleet had been ruined and I wholly inexcusable; for I had lost the wind, contrary to the results of the council of war, which was, that we should by all manner of means shun fighting the enemy, if they have the wind of us. . . . Had I made one step towards losing the wind, I had not only acted contrary to the unanimous declared opinion of the council of war, but contrary to my own judgment, declared under my hand. What reflections that might have drawn upon me I humbly submit to the judgment of this honourable Court."

Two conditions thus governed the whole tactics of the action; the direction of the wind and the superior numbers of the French. Had it been made a decisive action, it must have ended in a decisive defeat of the only fleet which stood between Great Britain and invasion. To make it an indecisive action it was necessary for the inferior fleet to

retain the advantage of the wind, and this, in Torrington's judgment, could only be done by fighting as he did. Who shall say that he was wrong? Certainly those who tried him, being members of his own profession, recorded their conviction that he was right. Probably they knew as well as he did that the action never ought to have been fought, that it was bad strategy to fight it. But the strategy was Nottingham's; the tactics which averted its worst consequences, though they could not prevent its immediate results assuming the dimensions of a grave disaster, were Torrington's own. We have already quoted Macaulay's strange and misguided comment on these masterly tactics. Admiral Colomb has reflected, in terms not too severe, on the perverse misunderstanding of the statesmen of the time; but surely the misunderstanding of the modern historian, not to speak of his positive misrepresentations, is even more astounding. We need only set against it the declaration of Torrington himself, a declaration sanctioned and endorsed by the unanimous judgment of the Court which tried and acquitted him:—

"I will not confine any man's judgment to mine, but I am very ready to reason the point of conduct with any man; but this I may be bold to say, that I have had time and cause enough to think of it; and that, upon my word, were the battle to be fought over again, I do not know how to mend it, under the same circumstances."

The battle lasted the whole day, and the Dutch ships suffered very severely. As the day advanced the wind dropped, and Torrington, observing this, and also that the set of the tide was against the French, first ordered the Dutch to anchor where they lay, and then, as Entick relates—

"with his own ship and several others he drove between them and the enemy, and anchored about five in the afternoon, at which time it was calm and the French fleet was driving away with the tide; however, judging it not safe to renew the fight at so great a disadvantage, he weighed anchor at nine in the evening and retreated to the eastward, taking advantage of the flood-tide."

The next day a council of war was called, and resolved "to endeavour to preserve the fleet by retreating, and rather to destroy the disabled ships, if they should be pressed by the enemy, than to hazard another engagement by protecting them." Some few ships were sacrificed in this way, for the French pursued with some vigour at first; but in the end Torrington carried the bulk of his fleet into the Thames, where, in Macaulay's words, "he ordered all the buoys to be pulled up, and thus made the navigation so dangerous, that the pursuers could not venture to follow him."

The panic in London was great when the news of the disaster became known. The English people, who live by sea power, have perhaps seldom fully realized the true conditions of the power by which they live. To them, in 1690, a reverse at sea was equivalent to the overthrow of their sea power, and instant measures were taken for a hasty defence against the invasion which every one believed to be imminent. It would have been imminent if Nottingham's counsels had prevailed in the sense and to the extent which he desired. But Torrington had so managed matters that his fleet, although manifestly inferior to its adversary, still remained master of the strategic situation. Tourville could not defeat it, because he could not get at it; and, so long as it was undefeated, it completely frustrated all serious enterprise on his part. He never attempted to land in force. Having abandoned the pursuit of Torrington, the French retired to the westward, and, being compelled by stress of weather to anchor in Torbay, they made a hasty descent on Teignmouth, where the appearance of the local militia quickly scared them away, after they had destroyed two or three defenceless coasting vessels, and carried off a few sheep. "And thus," says Entick, oddly enough, "were the great designs, both of the French and the discontented, entirely baffled by the vigilance of the Queen." It was not the vigilance of the Queen, still less the sagacity of her counsellors, that baffled the enterprises of Tourville and the designs of

Louis XIV., but the strategic insight of Torrington and the consummate skill with which he devised and applied a tactical remedy for the strategic blunders of Nottingham. Had he been allowed to follow his own counsel and that of his colleagues, and to avoid an engagement with Tourville until he could encounter him on equal terms, not a corporal's guard of the militia need have been set in motion. Tourville could have done nothing without first disposing of Torrington's fleet, and Torrington was resolved to give him no opportunity of doing so. Sooner or later the arrival of Killigrew and Shovel on the scene would have placed Tourville between two fires, and compelled him to fight in circumstances in which victory would have been more than doubtful, and defeat would have involved total destruction. Even as it was, with Torrington defeated and driven back, Killigrew and Shovel isolated and practically outside the field of operations, Tourville was completely baffled and returned to Brest, with nothing better to show for his enterprise than the laurels of a barren victory, and the booty of half a dozen sheep and two or three defenceless coasters. The comment of Torrington, here as elsewhere, goes straight to the root of the matter:—

"It is true, the French made no great advantage of their victory, though they put us to a great charge in keeping up the militia; but had I fought otherwise, our fleet had been totally lost, and the kingdom had lain open to an invasion. What then would have become of us in the absence of His Majesty and most of the land-forces? As it was, most men were in fear that the French would invade; but I was always of another opinion; for I always said that, whilst we had a fleet in being, they would not dare to make an attempt."

In the whole chapter of naval strategy, theoretical and practical, there is no article more pregnant or more profound in its significance than that which is embodied in this phrase of Torrington's—"a fleet in being." A fleet in being, too large to be treated as a negligible quantity by an adversary opposed to it, is an absolute bar to all serious enterprise, maritime or territorial, on the part of

that adversary. Maritime enterprise on a large scale must necessarily involve a decisive engagement, and this, of course, the commander of the inferior fleet will do his best to avoid. Territorial enterprise, on the other hand, is, as we have seen, the one naval operation of all others which requires an undisputed command of the sea as a condition indispensable not merely to its success but even to its inception. "Whilst we observe the French," said Torrington, "they cannot make any attempt either upon ships or shore, without running a great hazard." In the armoury of military strategy there is no single weapon so potent as that of the fleet in being is in the armoury of naval strategy. The advance of an invading army into a hostile territory cannot be prosecuted in the face of an opposing force which bars the way to its objective, until that force has been defeated; a fortress unreduced which threatens its communications equally paralyzes its advance. A fleet in being discharges both these functions at once. It is more mobile than an army; it is more difficult to reduce than a fortress; its passage from place to place leaves no trace behind; and, except by direct observation, neither easy to sustain nor difficult to baffle, its movements cannot be detected. Thus, as occasion serves, it can operate with equal effect either as a strategic bar to the advance of a hostile fleet, or as an unreduced fortress which threatens its communications and its rear; and it can do this, not at one place only, but wherever the movements and apparent designs of the enemy appear to offer a strategic opportunity or advantage.

It may be urged, perhaps, that these conditions and advantages apply with equal or even greater effect to the hostile naval force opposed to the fleet in being and assumed to be superior to it. But that is not so. The objective of a hostile fleet must be one of three things—the principal naval force of its adversary, a detached naval force of its adversary, or some point of territory on which a landing can be effected. Whichever of the three Tourville had elected to pursue, the strategy of Torrington provided an

effective answer to his design. If Tourville forced him back, he would, while avoiding a battle, so order matters that his own fleet should be placed in a position at once of perfect safety and of commanding observation. If Tourville returned to the westward for the purpose of intercepting the squadrons of Killigrew and Shovel, Torrington would follow him and hover upon his flanks and rear. It is true that it was no more difficult for Tourville to baffle observation in these circumstances than it would have been for Torrington in the contrary case. But while Torrington, being inferior to his adversary, and desiring to avoid an engagement, would gain all he wanted by eluding observation, Tourville would gain little in any case, and, not knowing where Torrington was, would be paralyzed for any serious offensive enterprise by the possibility that his adversary might appear in force at the critical moment. This applies still more strongly to the alternative of territorial attack. Hence, although the position in which Torrington found himself was one which no patriotic Englishman could ever regard without indignation and alarm, it appears to us to be indisputable that his strategy, as masterly in its conception as it was splendidly steadfast in its prosecution, was the only means whereby his country could be rescued from the perils which environed it.

It remains to consider the light thrown by the teaching of history and experience on the naval circumstances of our own time. We are not now in the days of the Armada or the Revolution, or even in the days of Nelson. Everything has changed in the materials and appliances of naval warfare since the last great naval struggle in which this country was engaged. To what extent have these changes affected the broad issues and conditions of naval strategy? The answer is, scarcely at all. Command of the sea, in the sense of strategic freedom of maritime transit, is now, as ever, the final cause of all naval warfare. With it, all things are possible which naval warfare can attain; without it, nothing is attainable. Let us consider the case of England being at war with such a combination of naval

Powers, say France and Russia, as would be capable of seriously disputing her supremacy at sea. Such a war might, and probably would, in the long run be decided by strategic issues of the military order; but strategic issues of the naval order would, most undoubtedly, have to be decided first. The British fleets must be supreme at sea, or the British Empire must fall to pieces. If it were solely a question of the defence of these islands against invasion, the example of Torrington shows undoubtedly that something less than the command of the sea might for a time suffice for our bare preservation. A "fleet in being," undefeated and able to avoid a decisive engagement, is an absolute bar to invasion across the sea. This is the true function of a fleet in the strategy of an inferior naval Power. But England can never accept the position of an inferior naval Power, because she has not merely her own shores to guard against invasion and insult: she has her Empire to defend. Sea power alone can do this, and command of the sea is the beginning and the end of sea power. In the case supposed, no English strategist would think of attempting to invade the central territories either of France or of Russia. The first thought of an English strategist must be the adequate defence of England's transmarine possessions. France can attack none of these except across the sea; Russia can attack only one of them, the Indian Empire, by land; and this, like every other part of the Empire, even the British Isles themselves, must be defended on or across the sea. We should lose India sooner or later if our sea power were overthrown. We could not retain a single one of our transmarine possessions, except by the forbearance of our enemies, if we lost the command of the sea.

Thus strategic freedom of maritime transit is the primary and indefeasible condition of the defence of the British Empire. Every fleet capable of impairing that freedom must either be defeated or "contained" in the military sense; so blockaded, that is, that it cannot leave its port of shelter without fighting an action against a superior force.

There are those who maintain that a blockade is impracticable in modern conditions of naval warfare; and they are probably, at least, so far right, that it is impossible so closely to blockade a port as completely to prevent the occasional and clandestine escape of individual ships. But a blockade at best is only a means to an end; the end being to bring the enemy to an action, or to nullify the strategic value of his force so long as he declines to fight. So long as that end is attained, therefore, the blockade is effectual for its purpose, notwithstanding the occasional and clandestine escape of individual ships. Only two courses are open to ships which thus break the blockade: either to engage individually in a *guerre de course*, a campaign of commerce-destroying, or, as some ingenious strategists have suggested, to proceed forthwith to some preconcerted rendezvous, there to constitute an organized fleet capable of acting on the offensive. Now, a *guerre de course* is always a vexatious incident of naval warfare, and often a very costly one to the naval Power attacked. But it has never yet sufficed by itself to determine the broad strategic issues of maritime conflict; and, according to Captain Mahan, it never can. It is even doubtful whether in these days of swift steam navigation it is likely to be so destructive as it was in the old sailing days. It is quite certain that it will never overthrow the strategic supremacy of a Power which holds the command of the sea; that can only be done by the suppression of the organized naval force, strategically distributed in sea-going fleets, which constitutes and embodies that supremacy. On the other hand, the enterprise of forming ships which have broken the blockade into an organized fleet capable of acting on the offensive is necessarily exposed to many hazards and perils. It amounts at best to a redistribution, not to an augmentation, of existing naval force; and the strategic answer to it is a corresponding redistribution of the forces of the superior adversary. That may or may not be successful in the immediate issue; it can hardly fail in the long run. Evasion on a large scale may frustrate

the purpose of a series of blockades, and compel the blockading fleets to concentrate. But command of the sea cannot be wrested from a superior naval Power by evasion; it can only be won by fighting. The idea that the evading fleet can engage in independent territorial enterprise of serious moment is purely chimerical; the "fleet in being" forbids it. With a superior force at its heels or on its track fugitive raids are the utmost limit of its offensive capacity, and fugitive raids are of little or no strategic moment.

But, with the command of the sea once assured, the power of England to resist the assault of even so formidable a combination as that of France and Russia is almost unlimited. As against Russia, the ultimate problem would be mainly a military one, and this we are not concerned to discuss; it must suffice to say that, unless the naval problem is previously resolved in our favour, the military problem must be decided against us. But as against France, the problem is from first to last purely a naval one. Moreover, the command of the sea is not merely the tenure by which alone we hold the Empire: it is also the title, the indefeasible title, by which we can at any time claim the transmarine possessions of any European Power which cannot defeat us at sea. Every Power in the world holds all its transmarine possessions merely as the caretaker of the ultimate naval Power. If England is that Power, every such possession is hers for the trouble of taking it whenever she is at war with the Power which holds it. If she is not, her Empire is at an end, and her very existence as an independent nation must ever be at the mercy of her victorious foes. This, and no less than this, is the strategic meaning of the command of the sea. To the British Empire its possession means security, its loss annihilation.

J. R. T.

THE ARMADA.*

"OCTOGESIMUS octavus mirabilis annus." So ran an ancient and famous prophecy, said to have been first written in German in the fifteenth century, though now only extant in a Latin version of the sixteenth. This prediction, says Bacon, in his essay "Of Prophecies," "was thought accomplished in the sending of that great fleet—the Spanish fleet that came in eighty-eight—being the greatest in strength, though not in number, of all that ever swam the sea." With the original purport of the prophecy and with its alleged fulfilment we need not concern ourselves. It is, at any rate, certain that the words were written long before the event, and it is equally certain that the event fits their meaning. The coincidence is one which naturally struck men's minds at the time. Three centuries later the prophetic character of the words is of less moment than their historic significance. Undoubtedly the year 1588 was an *annus mirabilis*. Two great forces, those of Rome and Protestantism, had long been striving in Europe for the mastery; and the overthrow of the Armada finally determined that the empire of the sea, with all that it involved, was to pass from a Catholic to a Protestant power. We may admit that the forces which then came into conflict were expressed mainly in terms of politics and not in terms of religion. We may assent to the proposition that the war between Philip and Elizabeth "had its origin in two perfectly clear and mundane causes"—the commercial policy adopted and enforced

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by the Spanish Government in respect of its West Indian and American settlements, and the countenance and assistance given by the English to the Spanish king's rebellious subjects in the Low Countries. But it is equally true to say with Froude that the Armada was "ostentatiously a religious Crusade. The preparations had been attended with peculiar solemnities. In the eyes of the faithful it was to be the execution of Divine justice on a wicked princess and a wicked people. In the eyes of millions whose convictions were less decided, it was an appeal to God's judgment to decide between the Reformation and the Pope."

The larger issues involved in the origin and result of this Titanic struggle belong to general history. We are not about to discuss them afresh. They have long ago been decided beyond appeal, not so much by the judgment of men as by the march of events. *Die Weltgeschichte ist das Weltgericht.* Things are what they are. The overthrow of the Armada determined once for all the course of human history and the type of modern civilization. So much is clear alike to the plain man, the historian, and the philosopher, and no fresh knowledge of the details of the conflict can alter our estimate either of its fundamental character or of its ulterior results. On the other hand, it is not too much to say that the detailed history of the Armada and its defeat has never yet been adequately written. It has only quite lately become possible so to write it. Froude and Motley in our own time first showed the way. They went to the archives, Spanish and English, and studied them each after his own fashion. In broad outline and general effect the narrative of each leaves little to be desired. But since they wrote, much original material has seen the light. Froude indeed twice returned to the subject which he had treated so brilliantly in his History. When the Spanish Story of the Armada, for which we are indebted to a Spanish naval officer, Captain Duro, was published, it was Froude who first made that doleful narrative accessible to English readers in one of his fascinating essays. At the very close of his life he

fused the two sides of the story together in that brilliant series of Oxford lectures which was only published after his death. A great writer of an earlier generation had also taken the Armada for his theme, and his work has opportunely been republished at a time when the great story is once more engaging the attention of all students of naval history. Southey's "Life of Lord Howard of Effingham," says Mr. David Hannay, the able editor of the work in question, contains as full an account of the Armada as could be written on the evidence accessible to him; and we need not add that, being written by Southey, though it may be superseded, it can never become obsolete. The antiseptic of style preserves good literature from decay; and Southey, Froude, and Motley will be read when the mere Dryasdust is forgotten. But the functions of Dryasdust, even of the mere Dryasdust, are not to be despised. His researches are the materials out of which the drama of history is or should be woven. It often happens, however, that the dramatic historian gets the start of Dryasdust. Froude, in particular, with all his dramatic insight, with all his magic of presentation, even with all his labours at the archives, was far too little of a Dryasdust. Diligently as he toiled at the archives, he was constitutionally incapable of reading them without the aid of his dramatic spectacles. He instinctively selected not what best displayed the truth, but what best suited his immediate purpose; and with the overmastering rhetorical impulse of a consummate writer, he often unconsciously distorted even what he selected. Hence the conscientious student is compelled to examine, and often to correct, Froude in the light of the original authorities. His picture is correct in the main; and in colouring, draughtsmanship, and dramatic presentation his composition is a masterpiece. But here and there it is inaccurate in detail—

> "And indeed the arm is wrong.
> I hardly dare—yet, only you to see,
> Give the chalk here—quick, thus the line should go!
> Ay, but the soul! he's Rafael! rub it out!"

So must any one feel who endeavours to correct Froude's magnificent picture in the light of more patient or more recent research. But the truth is the truth, and history is not a picture. Until quite lately, however, Froude's narrative as the latest and most dramatic has necessarily held the field. He who would study the history of the Armada independently must have gone direct to the archives themselves. But a new spirit has lately been infused into the study of naval history. Captain Mahan has created the philosophy of the subject. Men are no longer content to regard the history of naval conflict either as a mere episode of general history or as a mere adjunct of military history. The great and pregnant conception of "Sea power" has been expounded with rare genius, and is fast being assimilated by the public mind as a new historical category. In the light of this new category all naval history requires to be reviewed and a great part of it re-written. A noteworthy illustration of this revived interest in naval history is to be found in the formation a few years ago of the Navy Records Society. The Society "has been established for the purpose of printing rare or unpublished works of naval interest," and "aims at rendering accessible the sources of our naval history, and at elucidating questions of naval archæology, construction, administration, organization, and social life." In other words, the Society aims at being the Dryasdust and not the dramatist of naval history—at publishing those original documents which are the necessary materials of the historian. There is no need to dwell upon the value of such a society, or upon the importance of the work it has undertaken. The only wonder is that it has not long ago taken a place among the literary institutions of the country. No Power in the world, ancient or modern, has so long or so instructive a naval history as England. Captain Mahan's great work is not upon the naval history of England as such, but upon the "Influence of Sea Power upon History." Yet it practically amounts to a history of the sea power of England. That is not so much from choice as from the

nature of the case. An analysis of sea power necessarily deals for the most part with the naval history of England, just as a philosophy of modern commerce must needs draw most of its material from the history of English trade. But the naval history of England has never yet been adequately treated as a whole by any native historian. Not only has the required insight been wanting, but the necessary materials have been largely inacessible. The Navy Records Society will supply the latter want. There is abundance of material ready to its hand, and to judge from the admirable performance of Professor Laughton, the learned and judicious editor of the first volumes issued by the Society, containing the State Papers relating to the Defeat of the Armada, there is every reason to anticipate that the publications of the Society will be not less instructive in editorial comment than copious in original material. It is, indeed, almost impertinent to praise Professor Laughton in this connection. The masterly series of naval biographies contributed by him to the "Dictionary of National Biography" attest his unrivalled knowledge of the facts of naval history and his firm grasp of its philosophy. Both qualities are specially needed in dealing with the history of the Armada; both are abundantly and most effectively displayed.

Spain in the sixteenth century was the dominant Power in Europe. The territory ruled by Philip II. was immense; his military prestige was unrivalled. On the sea, however, he was not unchallenged, in spite of the wealth of the Indies and the still recent glories of Lepanto. The adventurous mariners of Elizabeth had often flouted his flag and harassed his squadrons on both sides of the Atlantic. But their attacks were for the most part isolated and desultory. The naval warfare of the sailing ship era had not yet differentiated itself as the conflict of ships at sea with definite strategic principles and appropriate tactical methods. It was still regarded as the conflict of troops on shipboard. In like manner the ships themselves were regarded as floating fortresses garrisoned by troops. A

naval battle was a series of hand-to-hand encounters, in which soldiers did the fighting and the sailors only worked the ships. In the Spanish Navy, at any rate, the gun was a despised auxiliary, and the decisive weapons were those of a conflict at close quarters. So long as these conditions prevailed, naval supremacy was held to be mainly a question of military strength. Hence when Philip resolved upon the invasion and conquest of England, it may well have seemed to most contemporary observers that to resolve was to achieve. The enterprise might be a serious one; but, if seriously undertaken, few would expect it to fail. The military resources of England were no match for the mighty power of Spain. Her naval resources were less unequal, as Professor Laughton conclusively shows, than has generally been supposed; but they were universally believed at the time to be immeasurably inferior. Over against the mouth of the Thames, Parma, the greatest captain of the age, was encamped in Flanders with an army of veterans. Should he cross the sea, there were no troops in England capable of withstanding him. It was only for him to carry his army over, and the refractory Netherlanders would be subdued in England, as Father Parsons, the Jesuit, said, while England itself would be added to the dominions of the Spanish king, and its people subjected once more to the spiritual sway of Rome. But between Parma's veterans and the shores of England there ran the sea, and neither to Parma nor to any other captain has it ever been given to cross the sea on a military enterprise except by virtue of sea power. For a military expedition to cross the sea, it is necessary that its leader should command the sea either absolutely or as the result of conflict. He commands it absolutely if there is no enemy afloat capable of disputing his passage—as France may be said to have commanded the sea in 1870–1. Otherwise he only commands it if and when he has defeated and driven off the sea any enemy afloat who is capable of disputing his passage. Command of the sea, as we have pointed out elsewhere,* means strategic freedom of transit

* See above, pp. 118–151.

and nothing else. A hostile "fleet in being" is its direct and peremptory negation.

We have been much taken to task in various quarters for insisting with so much emphasis on the "fleet in being." We are nevertheless wholly impenitent in the matter. The phrase, it is true, is not a term of art. It does not determine the issues involved with the cogency of a mathematical demonstration. But it expresses forcibly and picturesquely a fundamental principle of naval strategy, it sums up the teaching of ages of naval history, and it does so in plain language which a plain man can understand, though strategic pedantry may pronounce it to be wanting in precision. He who contemplates a military enterprise of any moment across the sea must first secure freedom of transit for his troops. To do this he must either defeat, mask, or keep at a distance any hostile naval force which is strong enough, if left to itself, to interfere with his movements. In default of one or other of these alternatives, it is safe to say either that his enterprise will not be undertaken or that it will fail. This is the true doctrine of the fleet in being—which is a fleet strategically at large, not itself in assured command of the sea, but strong enough to deny that command to its adversary by strategic and tactical dispositions adapted to the circumstances of the case. Until such a fleet has been disposed of, no serious enterprise across the sea is possible. In point of fact, command of the sea and a fleet in being are mutually exclusive terms. If command of the sea means freedom of transit, it stands to reason that a force capable of impairing that freedom is *ipso facto* incompatible with the command of the sea. So long as a hostile fleet is in being, there is no absolute command of the sea; so soon as command of the sea is established, there is no hostile fleet in being.

It has been contended that this doctrine is disallowed by the teaching of the late naval war in the East. It is argued that long before the battle of Yalu the Japanese, neglecting the Chinese fleet in being, had successfully landed an army in Corea. A temporary evasion of the

fleet in being is always possible—perhaps in some rare and exceptional cases it may be justified by sound considerations of strategy and by a sound estimate of the relative strength of the forces engaged. Napoleon evaded Nelson's fleet when he carried his troops to Egypt. The battle of the Nile was the immediate consequence, and the total discomfiture of the French expedition to Egypt was the ulterior result. If Admiral Ting had been a Nelson, and had commanded a fleet such as Nelson commanded, the Japanese invasion of Corea must have ended in disaster. But no sooner had the battle of Yalu ended in the retreat of the Chinese squadron to Port Arthur—a result which showed that Admiral Ito had rightly gauged the value of the Chinese fleet in being—than the whole of the strategy of Japan was directed to the destruction of the surviving Chinese fleet—a fleet still in being, although discomfited and overmatched. With this object Port Arthur was invested, assaulted, and captured, but not in time to prevent the escape of the Chinese fleet. With this object, again, Wei-hai-wei was, in its turn, invested, assaulted, and taken: and only when what remained of the Chinese fleet was finally surrendered to Japan was the way to Pekin opened and the resistance of China overborne. Even if Port Arthur and Wei-hai-wei had held no troops capable of taking the field, it would have been necessary for Japan to reduce them, lest they should serve as shelters to a fleet still in being and still within striking distance of the ulterior Japanese objective. Thus the inexorable conditions of naval warfare asserted themselves. Though the Chinese ships dared not show themselves beyond the range of the guns of their fortresses, yet no serious military enterprise could be undertaken by Japan in the Gulf of Pe-chi-li until the Chinese fleet, crippled and overmatched as it was, had actually ceased to exist. Rarely in the history of naval warfare has the doctrine of the fleet in being been more triumphantly vindicated.

The foregoing argument, though apparently a digression, is, in reality, strictly germane to the case of the Armada

and its defeat. There were many who thought at the time, as there are perhaps some who think even now, that Parma alone could have undertaken and accomplished the invasion of England. Lord Howard and his comrades never doubted their power to cope with the Spanish fleet, If they had had their way, it would never have crossed the Bay of Biscay. But they feared Parma's troops. Even after he had chased the defeated and flying Armada away to the North, and knew that for that year at any rate nothing more was to be feared from it, Drake wrote to Walsyngham :—

"We ought much more to have regard unto the Duke of Parma than to the Duke of Sidonia and his ships. . . . My poor opinion is that the Duke of Parma should be vigilantly looked upon for these twenty days, although the army of Spain return not this way; for of them I have no great doubt."

Wynter alone among Lord Howard's captains seems to have had a clear grasp of the situation.

"I suppose," he wrote on June 20, "if the countries of Holland and Zealand did arm forth but only the shipping which the Lord Admiral at his departing delivered unto our Admiral in writing that they would send from those parts to join with us here, and that was thirty-six sail of ships of war, and that it were known to the Prince those did nothing but remain in readiness to go to the seas for the impeaching of his fleet whensoever they did come forth, I should live until I were young again or the Prince would venture to set his ships forth. And again, if her Majesty's ships, and such others as doth but now remain under our Admiral's charge, may be continued in the state we are in and not to be separated, the Prince's forces, being no other than that which he hath in Flanders at this time (upon whom we mean to keep as good watch for their coming forth as possible we can), dare not come to the seas."

Here is the fleet in being in full operation. The Armada was about to sail when these words were written. In fact, none knew in England but that it had sailed and might appear at any moment in the Channel. But Wynter, a seaman of nearly fifty years' experience, at any rate knew that Parma was powerless for offence not only until

the Armada had actually appeared, but until it had disposed of the forces afloat which held Parma in check. It must be acknowledged, however, that Wynter subsequently abandoned this view, and recommended the fortification of the approaches to the Thames.

Parma, to do him justice, was under no delusion on the subject; and Philip, though no seaman himself, was too well advised to think that Parma without a commanding fleet could stir from the shores of Flanders. Parma indeed had to reckon not only with the English naval force stationed in the Straits of Dover, but with those ships of Holland and Zealand on which Wynter, as we have seen, relied. In fact, so far as Parma was concerned the Dutch fleet was the key of the situation. This fact, which is disputed, though on grounds which appear to us to be insufficient, by Froude, is far from adequately recognized by Professor Laughton. Motley alone among modern historians appears to have grasped its full strategic significance. Parma, like Napoleon two centuries later, could provide himself with abundance of transport, and, like Napoleon, could exercise his troops in rapidity of embarkation. But beyond this he could do nothing. The Dutch fleet on the one side, the English fleet on the other, held him in their grip. As in 1805, so in 1588, the real and final obstacle to the invasion of England was invisible to the immediate spectators of the conflict. "Those far-distant, storm-beaten ships," writes Captain Mahan in the most impressive passage of his history, "upon which the Grand Army never looked, stood between it and the dominion of the world . . . While bodily present before Brest, Rochefort, and Toulon, strategically the British squadrons lay in the Straits of Dover, barring the way against the army of invasion." In a similar spirit, and with a strategic insight which has too often been denied to our own historians, Motley writes:—

"Farther along the coast, invisible but known to be performing a most perilous and vital service, was a squadron of Dutch vessels of all sizes, lining both the inner and the outer

edges of the sandbanks of the Flemish coasts, and swarming in all the estuaries and inlets of that intricate and dangerous cruising ground between Dunkerk and Walcheren. Those fleets of Holland and Zeeland, numbering some one hundred and fifty galleons, sloops, and fly-boats under Warmond, Nassau, Van der Does, de Moor, and Rosendael, lay patiently blockading every possible egress from Newport, or Gravelines, or Sluys, or Flushing, or Dunkerk, and longing to grapple with the Duke of Parma as soon as his fleet of gunboats and hoys, packed with his Spanish and Italian veterans, should venture to set forth upon the sea for their long-prepared exploit."

A striking confirmation of the justice of this view has quite recently come to light in a new volume of Venetian State Papers edited for the Master of the Rolls by Mr. Horatio F. Brown. The Battle of Gravelines, which finally shattered the power of the Armada, and drove it in fugitive disarray into the tempestuous seas of the North, was fought on August 8, according to the continental reckoning of the time, though Professor Laughton prefers to give the date as July 29, in accordance with the old style then in use in England. But the news of this great and unexpected victory spread through Europe very slowly, and for several weeks many rumours of a decisive Spanish victory were afloat. So persistent and detailed were these rumours that on August 27 the Venetian Senate passed, by an almost unanimous vote, a resolution for congratulating the King of Spain on the success of the Armada. Information to the same effect was communicated on the same day to the Pope by the Spanish Ambassador in Rome; and Giovanni Gritti, the Venetian Ambassador, at once waited on his Holiness to congratulate him on "the good news of the Catholic Armada." But the Pope was incredulous. He had no great belief in the fleets of Spain or in the capacity of Sidonia. He had promised Philip a million of gold, but it was only to be paid on receipt of the news that a landing had been effected in England. On August 20 he had said to Gritti, "talking with his usual frankness for a considerable time"—

"The King goes trifling with this Armada of his, but the Queen acts in earnest. Were she only a Catholic, she would

be our best beloved, for she has great worth. Just look at Drake! Who is he? What forces has he? And yet he burned twenty-five of the King's ships at Gibraltar, and as many again at Lisbon; he has robbed the flotilla and sacked San Domingo. . . . We are sorry to say it, but we have a poor opinion of this Spanish Armada, and fear some disaster."

Hence the astute Sixtus V. was not too ready to credit the rumours which had imposed upon the Venetian Senate and thrown it into an ecstasy of congratulation. When he received Gritti's congratulations on the good news, "his Holiness said he did not give it full credence, and that he desired further verification. He pointed out . . . that even if it were true the victory was not very great, for the body of Drake's fleet had escaped. *Unless the Duke of Parma and the Duke of Medina effected a junction, nothing else mattered much.*"

The sagacity of Sixtus V. was abundantly vindicated in the issue. Parma, as we know, had not and never could have effected his junction with Sidonia, and, as the Pope said—"with his usual frankness"—"nothing else mattered much." The reason why Parma could not effect his junction with Sidonia is given in his own words in a letter written "from Dunquerque" on August 12, and published in the same volume of State Papers. A copy of this letter was obtained by Gritti and forwarded to the Venetian Senate.

"On the 7th came a pilot with news that the Armada was off Calais; whereupon the Duke of Parma left Bruges to hasten on the embarkation of his troops and to be nearer the Armada. On the morning of the 8th came d'Areco, Secretary to the Duke of Medina Sidonia, with confirmation that the fleet was lying in the roads of S. Jean, close to Calais; and that although the enemy continued to harass them and fire shots, still the whole fleet was in excellent order and complete, though the Duke had not yet been able to force the enemy to come to an engagement, as the wind was always against him. The Duke of Parma left at once for Nieuport, where the detachment of twelve thousand men were to embark; and then came early to Dunquerque, where everything was ready, so that within that day the embarkation might have been carried out at Nieuport and at Dunquerque. At this juncture came the Superintendent-General, Don Giorgio

Manrique, with further despatches of the day previous, explaining the danger to which the Armada was exposed if caught by a storm in the Channel, and urging the Duke of Parma to put to sea with his ships and troops and to effect a junction with the Armada, so that in a body they might attack the enemy's fleet or secure a port for our own. This operation was impossible, owing to the set of the wind, which was such as to prevent even ships specially constructed for navigating those waters from putting out, *to say nothing of the enemy's ships which barred the egress.*"

We shall see in the sequel what and where these enemy's ships were.

When Philip first began seriously to entertain the idea of invading England, it was not in his plan for Parma and his troops to take part in the enterprise. The Armada was to sail direct from Spain under the command of Santa Cruz in sufficient strength to overcome all opposition, and carrying with it as many troops as were required for the military objects of the expedition. But Santa Cruz, when called upon for his plans, produced a demand for 596 ships of all kinds, of which 150 were to be great ships and galleons, 360 transports, hulks, and despatch boats, 40 galleys, and 6 galleasses, and 40 Italian frigates and Neapolitan *felucche*, besides 200 boats for the purpose of landing the army. The men required were 55,000, which, making an allowance for sick and deserters, and for the military defence of the Armada during the invasion, would leave a force of 35,000 for offensive purposes on shore. Adding to these sailors and marines, galley slaves, cavalry, artillery, engineers, staff officers, adventurers, domestic servants, and other non-combatants, the total number of men to be employed and provided for was, in the estimate of Santa Cruz, no less than 94,222. The cost for eight months was estimated at 4,373,500 Spanish crowns. These figures differ somewhat from those given by Professor Laughton on the authority of Captain Duro, but they are taken from a "Short Summary of the Supplies required for an Attack on England, calculated for eight months; forwarded by the Marquis of Santa Cruz to his Catholic

Majesty." A copy of this Summary was obtained by Lippomano, the Venetian Ambassador in Spain, and forwarded by him to the Venetian Senate on August 6, 1586.

"Philip," says Professor Laughton, "could not approve a project so vast and so costly; he resolved on the expedition, but conceived the idea of doing it at a cheaper rate by utilizing the army in the Low Countries. From this grew up the scheme which ultimately took form. The Duke of Parma, in Flanders, was to prepare an army of invasion and a number of flat-bottomed boats to carry it across the sea. The Marquis of Santa Cruz was to bring up the Channel a fleet powerful enough to crush any possible opposition, and carrying a body of troops which, when joined with those under Parma, would form an army at least as numerous as that which Santa Cruz had detailed as sufficient."

Such was the plan finally adopted; but many things concurred to delay its execution. In the spring of 1587 Drake achieved his famous exploit of "singeing the King of Spain's beard," descending with his fleet on the coast of Spain, destroying thirty-seven ships and a vast quantity of munitions and supplies collected at Cadiz, and insulting Santa Cruz himself at Lisbon. This brilliant feat of arms, which alarmed all Spain, appears to have quickened Philip's resolve to make an end once for all of Elizabeth and her buccaneers, as he called them. The Pope, who had promised him large subventions in certain contingencies, was constantly urging him to action, and Philip in his turn was as constantly urging Santa Cruz to make a start. But the expedition was not ready, and before it was ready the season was so far advanced that Santa Cruz, who knew what naval warfare was, hesitated to undertake the risk. He recommended delay until at least the March of the following year. Before that time came Santa Cruz was dead. He was already advanced in years, and the anxieties of the expedition, combined with Philip's impatience and mistrust, had worn him out. Lippomano, the Venetian Ambassador in Spain, forwarded to the Senate a copy of a letter written by the person in whose arms Santa Cruz breathed his last. "I will only say now,'

writes this anonymous correspondent, "that I frequently heard him sigh and complain that the attacks made upon him at Court were sending him to his grave. It is indeed a death to be deeply lamented for many reasons, and perhaps as time goes on the loss will be seen to be even greater than it looks."

These words were prophetic. The death of Santa Cruz sealed the fate of the Armada. It is probable that the psychological moment was already passed. Could the Armada have sailed in the autumn, Elizabeth would have been found unprepared. "The King of Spain," said the Pope to Gritti in July 1588, "should have listened to our advice last September, when we entered into alliance; we then told him that he should not delay, but ought to deliver the attack at once, as the Queen was unprepared and unarmed, instead of allowing her time to arm as she has done. At that moment he might have achieved with small forces that which, perhaps, he will not be able to effect even with great forces." But what Santa Cruz might have achieved with the great force he was preparing was beyond the capacity of his successor, Medina Sidonia, to achieve with any forces, however great. Santa Cruz was a seaman of experience, capacity, and renown. Sidonia was no seaman at all. He could neither fight nor plan, and, to do him justice, he never deceived either himself or his master on the score of his own incapacity. On receiving the news of his appointment to the command of the Armada, he wrote to Philip's secretary—

"My health is bad, and from my small experience of the water I know that I am always seasick. . . . The expedition is on such a scale, and the object is of such high importance, that the person at the head of it ought to understand navigation and sea-fighting, and I know nothing of either. I have not one of those essential qualifications. I have no acquaintances among the officers who are to serve under me. Santa Cruz had information about the state of things in England; I have none. Were I competent otherwise, I should have to act in the dark by the opinions of others, and I cannot tell to whom I may trust. . . . If you send me, depend upon it I shall have a bad account to render of my trust."

Such a letter, while it does credit to Sidonia's knowledge of himself, or, as Froude suggests, to the cynical candour of his more masculine wife, was assuredly of fatal augury for the issue of a great and arduous enterprise. But Philip was perhaps glad to be rid of a servant who, like Santa Cruz, knew his own mind and took his own course. He selected Sidonia as a man who, having no initiative of his own, would submissively do his bidding. He would fain have commanded the Armada himself; but that being impossible, he preferred to entrust it to a puppet and not to a man. "You are sacrificing yourself," he wrote to Sidonia, "for God's service and mine. I am so anxious that, if I was less occupied at home, I would accompany the fleet myself, and I should be certain that all would go well. Take heart; you have now an opportunity of showing the extraordinary qualities which God, the Author of all good, has been pleased to bestow upon you."

Sidonia was appointed, and the Armada was doomed. It might have failed under Santa Cruz. It was certain to fail under his successor in command. Profoundly and justly distrustful of himself, with no experience of the sea, with a fleet formidable in appearance but eminently unfitted for the warfare that was before it, well equipped indeed with fighting men, but ill-found in many essential respects and fraudulently victualled with rotten food and stinking water, with a scheme of strategy radically faulty, and with a system of tactics entirely unadapted to the nimble warfare of his foe, Sidonia was about to encounter the most hardy, experienced, determined, and even desperate race of mariners the world has ever known. The only real danger to England—and in our judgment it was, in spite of Professor Laughton's ingenious apology for Elizabeth's conduct, a very real and almost a fatal one—was that Elizabeth should fail to appreciate the value and strength of her sea power; that anxious as she was for peace, and not perhaps believing that Philip's intentions were really serious, she should relax her naval preparations, lest by prosecuting them she should bring about the very attack she desired to

avert. This we believe to be the real clue to the apparent indifference which Elizabeth showed in regard to the strength and equipment of her fleet. On this point Professor Laughton has little difficulty in showing that Froude, who incessantly denounces Elizabeth's parsimony and neglect, constantly overstates his case and as often misunderstands the facts. The mariners of Elizabeth's day were no strangers to rough fare and scanty rations; they were content with little and accustomed to shift for themselves. Such ships as they had were at any rate tight and trim. Hawkyns had seen to that, according to the repeated testimony of Howard, Drake, and others, but he did not on that account escape calumny. The men were willing and eager to fight; and if they often found their ammunition short at a pinch, they were burning powder at a rate the like of which the world had never before seen. So much may be said, and said quite legitimately, in Elizabeth's defence; but it does not cover the whole case. Either Elizabeth never realized the magnitude and imminence of the peril, or if she did she thought it more politic to ignore them. On no other hypothesis is it easy to explain the frequent remonstrances of Howard and his captains. "Sparing and war have no affinity together," wrote Howard bitterly enough on April 7, when, if Santa Cruz had not died, the Armada would already have been on its way. That there would be war he had no doubt whatever. A month earlier he had written, on March 10:—

"I am sorry Sir F. Drake is not in more readiness than he is. I know the fault is not in him. I pray to God her Majesty may not repent this slack dealings. It had been good he had been ready, though he had but lien on our coast. I am afraid he will not be ready in time, do what can be done. All that cometh out of Spain must concur in one to lie, or else we shall be stirred very shortly with heave and ho. I fear me ere it be long her Majesty will be sorry that she hath believed some as much as she hath done, but it will be very late. . . . For her Majesty's four great ships, I am out of hope to see them abroad, what need soever shall be. If things fall out as it is most likeliest, they shall be to keep Chatham Church when they should serve the turn abroad. . . . Sir, if her Majesty think that her princely

preparation of Sir F. Drake's fleet, and this that I have, should be a hindrance to a peace and that the King of Spain should take it ill, why should not the King of Spain think that her Majesty hath much more cause to think ill of his mighty preparations? It will peradventure be said that he hath many ways to employ them and not to England. That is easily answered, for it is soon known by the victualling; and he never prepares so many soldiers for the Indies."

Many similar passages might be quoted, but we have no need of further witness. Howard's words establish the slackness and unreadiness of Elizabeth's preparations, and apparently assign the true cause for them. Other defects in the equipment of the English ships were probably characteristic of the time, and not specially due to Elizabeth's parsimony. But her reluctance to acknowledge the imminence of the peril and to put her whole force at sea in order to avert it may perhaps be explained by causes which lay deeper. For months she had been negotiating for peace with Parma. Neither she nor Philip was disposed to fight if acceptable terms could be had without fighting. Philip knew that now that the Queen of Scots was dead no prince in Europe, least of all the Pope, was at all anxious to see England added to the overshadowing dominions of Spain, and he feared that even the success of the Armada might bring him no profit commensurate with its immense and inevitable cost. All this was probably well known to Elizabeth. Even the Pope thought that Philip's ostentatious preparations were intended to be employed rather as a card in the diplomatic game he was playing than as a weapon in actual war. Elizabeth might well think the same, and might quite honestly persuade herself that to make counter-preparations in equally ostentatious fashion would inevitably precipitate the conflict she was genuinely anxious to avoid. Hence the four great ships were made to 'keep Chatham Church' as long as was possible and far longer than was prudent, though they were ultimately ready in time, and many other necessary preparations were not so much culpably neglected as deliberately postponed. It was a defensible policy, but a

dangerous one; defensible because he who really desires peace—and Elizabeth must have desired peace, for she had little to gain and much to lose by war—must needs avoid a provocative attitude; but dangerous because, if Philip really meant war, nothing but the sea power of England could save the kingdom from invasion.

Philip may not have meant war if he could avoid it, but when the menace of the Armada failed to extort from Elizabeth such terms as he could accept, he was left with no alternative. Either Elizabeth must accept his terms or her pride must be humbled by defeat. When in May the negotiations had produced no result, Philip resolved to wait no longer, and the Armada set forth from Lisbon. Its first proceedings were an augury of the fate which awaited it. Baffled at first by contrary winds and afterwards scattered by a storm, Sidonia's clumsy and unwieldy squadrons remained at sea long enough to discover their own nautical deficiencies and the unwholesome quality of their victuals, and then returned to Corunna. Sidonia was for abandoning the enterprise, but Philip was now resolved. Ships were repaired, provisions renewed and crews recruited, and before the middle of July the Armada was again at sea. This time the wind was favourable, the Bay of Biscay was crossed, and the mouth of the Channel was at last reached. Elizabeth's hesitation and her parsimony, whether politic or culpable, had made it impossible for her captains to dispute its passage or to attack it, as they themselves desired, on its own coasts and even in its own ports. The fate of England and of Europe was now to be decided in the narrow waters of the Channel.

We may refer to Professor Laughton's Introduction for a detailed comparison of the forces engaged. It is there shown conclusively and in detail that, however great the apparent superiority of the Spaniards—a superiority which imposed on all contemporaries not familiar with the sea and its warfare—the real advantage lay in many respects with the English. The Spanish ships were unwieldy and slow to manœuvre. The English ships were far nimbler

in movement and far more skilfully handled. Number and size of ships told for apparent strength on the one side; but the balance was more than redressed by superior seamanship, superior gunnery, and incomparably more skilful tactics. And, after all, in spite of hesitations and economies, delays and shortcomings, when the Armada reached the Channel the fleets of England were not unready to receive it. Howard and Drake were at Plymouth with such ships as they could muster and equip. Seymour, with a not inadequate force, was in the narrow seas to the eastward keeping a close watch on Parma. This was a form of passive defence which commended itself little to the fiery spirit of Drake. But it was too late now to pursue the more adventurous but really sounder policy which Drake had recommended to the Council as early as the end of March:—

"If her Majesty and your Lordships think that the King of Spain meaneth any invasion in England, then doubtless his force is and will be great in Spain; and thereon he will make his groundwork or foundation, whereby the Prince of Parma may have the better entrance, which, in mine own judgment, is most to be feared. But if there may be such a stay or stop made by any means of this fleet in Spain, that they may not come through the seas as conquerors—which, I assure myself, they think to do—then shall the Prince of Parma have such a check thereby as were meet.

"To prevent this, I think it good that these forces here should be made as strong as to your Honours' wisdoms shall be thought convenient, and that for two special causes:—First, for that they are like to strike the first blow; and secondly, it will put great and good hearts into her Majesty's loving subjects both abroad and at home; for that they will be persuaded in conscience that the Lord of all strength will put into her Majesty and her people courage and boldness not to fear any invasion in her own country, but to seek God's enemies and her Majesty's where they may be found; for the Lord is on our side, whereby we may assure ourselves our numbers are greater than theirs. I must crave pardon of your Lordships again and again, for my conscience hath caused me to put my pen to the paper; and as God in His goodness hath put my hand to the plough, so in His mercy it will never suffer me to turn back from the truth.

"My very good Lords, next under God's mighty protection,

the advantage and gain of time and place will be the only and chief means for our good; wherein I most humbly beseech your good Lordships to persevere as you have begun, for that with fifty sail of shipping we shall do more good upon their own coast, than a great many more will do here at home; and the sooner we are gone, the better we shall be able to impeach them."

Again, on April 28 Drake wrote to the Queen herself, beseeching her to pardon his boldness in the discharge of his conscience, declaring that he desired peace as much as any man, but imploring her to consider that "these great preparations of the Spaniard may be speedily prevented as much as in your Majesty lieth, by sending your forces to encounter them somewhat far off, and more near their own coasts, which will be the better cheap for your Majesty and people and much the dearer for the enemy." Howard was entirely of the same mind. The great seamen of those days never faltered in their grasp of the principle expressed by Farragut in the maxim, "The more you hurt the enemy, the less he will hurt you." They knew that Philip was preparing a great naval armament, and they knew that the surest way to defeat its object, whatever it might be, was to destroy that armament at sea. It might be going to Ireland, it might be going to Flanders; but wherever it was going, if it could be caught on its own coasts and there "impeached," its ulterior object would be frustrated. "The opinion," wrote Howard on June 14, "of Sir Francis Drake, Mr. Hawkyns, Mr. Frobiser, and others that be men of greatest judgment and experience, as also my own concurring with them in the same, is that the surest way to meet with the Spanish fleet is upon their own coast, or in any harbour of their own, and there to defeat them." But Elizabeth and her Council could not see matters in this light. Possibly they thought that to send the fleet away, even for the purpose of finding and fighting the enemy, was to expose the country to peril. This is a very common delusion of statesmen who direct naval campaigns without knowledge of the sea, and of theorists on naval warfare who look at it with a military rather than a naval eye. A fleet being essentially a mobile

armament, there are nevertheless many who never can bring themselves to regard this mobility as the determining factor of naval strategy. They want to see the fleet and know that it is there, a visible, tangible, material element of more or less local defence; and they cannot understand that the true place of a fleet in war is the place, however distant, where it can meet and fight the enemy to the greatest advantage. "Those far-distant, storm-beaten ships, upon which the Grand Army never looked, stood between it and the dominion of the world." It was St. Vincent, a seaman, who placed them where they were, and it was Lord Barham, another seaman, who determined their strategic disposition, far away from the shores of England, at the decisive moment when Villeneuve was returning across the Atlantic. But neither a St. Vincent nor a Barham was among the Councillors of Elizabeth. "As has often happened since," says Admiral Colomb, in speaking of Torrington's case, "the statesman was found on the quarter-deck, and the rash blunderer at the seat of Government." Not only has it happened since, it had happened a hundred years before. It will happen again some day if Englishmen continue to neglect or allow their rulers to misread the lessons of naval history.

It may be, however, that Elizabeth, who was still negotiating with Parma, still believed in the possibility of peace. So tortuous and so unscrupulous was the diplomacy of those days, so complex, so subtly disposed, and so craftily handled were the forces at work, that perhaps we shall never know what was her real mind in the matter: whether she really believed in the sincerity of the negotiations and in the near prospect of peace, or whether she was only trying to make Philip believe she believed in them, it almost passes the wit of man, at this distance of time, to determine. But the shrewd sense and plain dealing of men like Howard and his comrades would soon have cut the tangled knot which Elizabeth, with all her patience and all her cunning, failed in the end to unravel. "Sir," continues Howard, in the letter quoted

above, "it is very strange that, in this time, the Commissioners cannot perceive whether they mean a peace without a fraud, or use the same to detract a time for a further device. And if our Commissioners do discover any detraction in them, only to serve their own turns, methinks her Majesty should use the like policy, and devise to beat them with their own rod."

But Elizabeth and her Council could not or would not see the wisdom of beating them with their own rod, and so far as they did see it they thought they better understood the strategy appropriate to the situation than men like Howard, "Sir Francis Drake, Mr. Hawkyns, Mr. Frobiser, and others that be men of greatest judgment and experience." On June 9 Walsyngham wrote to Howard on behalf of the Council:—

"My very good Lord,—Her Majesty, perceiving by your Lordship's late letters to me that you were minded to repair to the Isles of Bayona, if the wind serve, there to abide the Spanish fleet or to discover what course they meant to take, doubting that in case your Lordship should put over so far the said fleet may take some other way, whereby they may escape your Lordship, as by bending their course westward to the altitude of fifty degrees, and then to shoot over to this realm, hath therefore willed me to let your Lordship understand that she thinketh it not convenient that your Lordship should go so far to the south as the said Isles of Bayona, but to ply up and down in some indifferent place between the coast of Spain and this realm, so as you may be able to answer any attempt that the said fleet shall make either against this realm, Ireland, or Scotland."

Howard had already answered this by anticipation in a letter written on June 13, before Walsyngham's letter had been delivered:—

"Sir," he said, "I protest, before God, I would I had not a foot of land in England, that the wind would serve us to be abroad; *and yet it is a hard matter and a thing unpossible for us to lie in any place or be anywhere to guard England, Ireland, and Scotland.*"

Here is the statesman on the quarter-deck again. The rash blunderers at the Council table could not understand that if you wish to "impeach" a hostile fleet with certainty,

you must go where it is certain to be found, not wait for it to appear in some one or other of half a dozen places where, after all, it may never be found, and where, if it does appear, you may not be at hand to "impeach" it. Howard explains this fully in a reply written to Walsyngham on June 15:—

"SIR,—Within three hours after I had written my letter, which herewith I send you, I received your letter of the 9th of this present by a pursuivant. Which letter I do not a little marvel at; for thereby you signify that her Majesty, perceiving by a letter I sent you heretofore, that I was minded to go on the coast of Spain, to the Isles of Bayona, her pleasure is that I should not go so far, but only off and on, betwixt the coast of Spain and England; lest the Spanish fleet should come into the height of fifty, and then should bend their course directly to this realm.

"Sir, for the meaning we had to go on the coast of Spain, it was deeply debated by those which I think the world doth judge to be men of greatest experience that this realm hath; which are these: Sir Francis Drake, Mr. Hawkyns, Mr. Frobiser, and Mr. Thomas Fenner; and I hope her Majesty will not think that we went so rashly to work, or without a principal and choice care and respect of the safety of this realm. We would go on the coast of Spain; and therefore our ground was, first, to look to that principal; and if we found they did but linger on their own coast, or that they were put into the Isles of Bayona or the Groyne, then we thought in all men's judgments that be of experience here, it had been most fit to have sought some good way, and the surest we could devise, by the good protection of God, to have defeated them. . . . And if we were to-morrow next on the coast of Spain, I would not land in any place to offend any; but they should well perceive that we came not to spoil, but to seek out the great force to fight with them; and so should they have known by message; which should have been the surest way and most honourable to her Majesty. But now, as by your directions to lie off and on betwixt England and Spain, the south-west wind, that shall bring them to Scotland or Ireland, shall put us to the leeward. The seas are broad; but if we had been on their coast, they durst not have put off, to have left us on their backs; and when they shall come with the south-westerly wind, which must serve them if they go for Ireland or Scotland though we be as high as Cape Clear, yet shall we not be able to go to them as long as the wind shall be westerly. And if we lie so high, then may the Spanish fleet bear with the coast of France, to come for the Isle of Wight; which for my part, I think, if they come to England, they will attempt. Then are we clean out of the way of any service against them.

"But I must and will obey; and am glad there be such there, as are able to judge what is fitter for us to do, than we here; but by my instructions which I had, I did think it otherwise. But I will put them up in a bag, and I shall most humbly pray her Majesty to think that that which we meant to do was not rashly determined, and that which shall be done shall be most carefully used by us; and we will follow and obey her Majesty's commandment. But if we had been now betwixt Spain and England, we had been but in hard case, the storm being so strong and continuing so long as it hath done; but upon the coast of Spain, we had had a land wind and places of succour. We meant not to have spoiled any town or village; only we must of necessity water; and when we lie betwixt both coasts, we must come to this coast to water, for so we are enjoined; and if the wind do not serve us to come on our own coast, then in what case shall we be, now that we must not go on the coast of Spain? We lay seven days in the Sleeve, which was as long as we could continue there without danger, as the wind was; and if some had been with us, they should have seen what a place of danger it is to lie on and off in."

Thus the true policy of offensive defence was disallowed by the Council and abandoned by Howard. One or two excursions into "the Sleeve"—that is, the sea between Scilly and Ushant—were made, but Howard was driven back as he anticipated by stress of weather, and the short time which elapsed before the appearance of the Armada was occupied in completing such stores and equipments as Elizabeth could be induced to provide. The defensive policy imposed upon Howard against his own judgment was radically faulty and might have been fatal. If the English fleet was not strong enough to "impeach" the Spaniard in his own waters, it was too weak to defend itself and its country at home. It was forbidden to do what its own leaders thought it best able to do, and set to a task which, as being more difficult in itself and far more precarious in its issues, it might have been unable to accomplish. It succeeded in the end, as we know. But that only proves that as it was equal to the more difficult task it must have been more than equal to an undertaking which, as Drake had assured the Queen, "will be the better cheap for your Majesty and people, and much the dearer for the enemy." "The advantage

of time and place," he wrote in another letter, "is half a victory; which being lost is irrecoverable." That advantage was lost and was never recovered. The Spaniard was overthrown in the end; but Elizabeth's strategy can only be defended by allowing that the defeat of Sidonia was the result of his own folly and not of the valour of his foes.

But if the strategy of Elizabeth and her Council was feeble and inconsequent, that of Philip and Sidonia was positively fatuous. The plan was for the Armada to hold the Straits of Dover while the troops of Parma were transported across under its protection, and reinforced by a large contingent supplied by the Armada itself. To carry out such a plan the first thing to be done was to dispose of any and every hostile fleet in being. Now when Sidonia reached the Channel there were three several and distinct fleets in being to be disposed of.

"There was, as we have seen," says Admiral Colomb in his very judicious and instructive comment on an earlier version of Professor Laughton's Introduction, "Lord Howard's fleet at Plymouth, Lord Henry Seymour's in the 'narrow seas' by the Straits of Dover, and Count Justin's blockading Dunkirk and Nieuport. Had Philip ever looked this matter in the face? Had he in any way prepared his naval forces for division into the necessary four parts, each of sufficient strength—one to mask Lord Howard, one to mask Lord Henry Seymour, a third to defeat and then to mask Count Justin of Nassau, and a fourth to conduct and cover the landing? There is no sign anywhere that ideas so obviously pressing found a place in his mind; and if Medina Sidonia in any way represented the mind of his master, there must have been a firm belief that in some way or other the descent could proceed to success in the very face of three opposing fleets."

In point of fact Sidonia's sole idea was to join hands with Parma as soon as possible. Perhaps he was anxious to shift on to the more capable shoulders of Alexander Farnese a responsibility for which he knew himself to be totally unfit. More probably he had no clear idea at all of what he was to do or how he was to do it, except that whether he left three or thirty fleets undefeated behind

him he was to get to the narrow seas as soon as possible, where if he could not help Parma it might be possible for Parma to help him. He needed Parma's help very sorely by the time he got there, but he had so ordered matters that no such help was to be had. The fault was with Philip, however, quite as much as with Sidonia. The King's final instructions to the latter were not to fight the English unless they attacked him, but to use all expedition in joining hands with Parma; or as Froude puts it, with perhaps too sarcastic an emphasis—

"The Duke was not to seek a battle. If he fell in with Drake"—Drake, it must be observed, was in Spanish eyes the leading spirit of the English defence, and his name stands for Howard as well—"he was to take no notice of him, but to thank God, as Dogberry said to the watchman, that he was rid of a knave. He was to go straight to the North Foreland, and there anchor and communicate with Parma. The experienced admirals who had learnt their trade under Santa Cruz—Martinez de Recalde, Pedro de Valdez, Miguel de Oquendo—strongly urged the securing Plymouth or the Isle of Wight on their way up Channel. This had evidently been Santa Cruz's own design, and the only rational one to follow. Philip did not see it. He did not believe it would prove necessary; but as to this and as to fighting, he left them, as he knew he must do, a certain discretion."

These are the instructions of a pedant; they were executed by a fool. There was no need to tell Sidonia to take no notice of Drake; it was certain that Drake would take plenty of notice of him. No sooner had the Armada passed Plymouth than Howard and Drake were at its heels, and there they stayed, fighting incessantly whenever the wind gave them a chance, until Sidonia anchored, according to his instructions, at Calais, having had more than enough of the *endemoniada gente*, as he had already learnt to call them, whom he had been sent to subdue. According to Lippomano, the Venetian Ambassador in Spain, his instructions were, if attacked by the enemy, to fight courageously; and that, to do him justice, he did. But though he could fight courageously, he could not fight effectively. He was outsailed, outmanœuvred, and as thoroughly outwitted as a man so

totally without the sort of wits required in a naval commander can ever be said to be. If he could have closed with his nimble foes, he might have crushed them. But Howard and Drake knew what they were about. Their strength was in seamanship and in the naval use of artillery. The Spaniards despised the gun and could fight best at close quarters. Howard and Drake never gave them a chance of coming to close quarters. They hovered on the rear and flanks of the Armada, "plucking their feathers little by little," as Howard said on the day of Gravelines, never losing an opportunity and never giving one, until at last their ammunition being expended, they were fain merely to follow and watch the enemy and see him anchor off Calais weary, disheartened, discomfited, and demoralized.

Thus, to the letter, the instructions of the pedant were executed by the fool. Sidonia had not attacked the enemy; he had fought courageously when attacked by him. He had anchored in the narrow seas and had opened communications with Parma. Yet he was no nearer his object than when he lay in the Tagus. If he had been a seaman, he would have known that the men who had fought him so desperately, so tenaciously, and withal so skilfully, would never leave him alone while a plank floated beneath them and a shot remained in their lockers. If he could not vanquish them or drive them off, he might as well have been anchored in the Dead Sea as in the Straits of Dover. Whatever his instructions were, he should have known that to leave such a foe behind him was merely sowing the wind to reap the inevitable whirlwind. As to securing Plymouth or the Isle of Wight, he might as well have attempted to seize the North Pole. So far was he from being able to cover Parma's descent upon England, that the first thing he did when he dropped anchor off Calais was to send off messengers to Parma and implore him to come forthwith to his assistance. If he could not defeat Howard and Drake, Seymour and Justin, once for all and all at once—for to this pass had

his futile strategy now brought him—he could get no help from Parma, and Parma could get no help from him. So impossible was it then, and so impossible is it always, to conduct an enterprise which involves command of the sea without first disposing of the hostile fleet in being.

For Parma himself was in no better case. Another fleet in being, that of Justin of Nassau, held him relentlessly in check, though Sidonia understood this as little as he understood that Howard and Drake were already his conquerors and his masters.

"Where was Farnese?" we quote from Motley. "Most impatiently the Golden Duke paced the deck of the *Saint Martin*. Most eagerly were thousands of eyes strained towards the eastern horizon to catch the first glimpse of Parma's flotilla. But the day wore on to its close, and still the same inexplicable and mysterious silence prevailed. There was utter solitude on the waters in the direction of Gravelines and Dunkerk—not a sail on the sea in the quarter where bustle and activity had been most expected. The mystery was profound, for it had never entered the head of any man in the Armada that Alexander could not come out when he chose."

Parma was afterwards bitterly attacked at Madrid for what was represented as his betrayal of Sidonia. But he said himself, as we have seen, that the enemy's fleet prevented his exit, and whether he meant it or not he certainly spoke the truth. Froude indeed insists that by the enemy's fleet Parma meant the English fleet and not the Dutch; that he never spoke of the Dutch as enemies, but always as rebels. It does not much matter which he meant. If two terriers are watching a rabbit hole, it is hard to say which of them prevents the exit of the rabbit. It is enough to know that the rabbit cannot bolt. Froude further attempts to show that the Dutch fleet had been driven into the Scheldt by a storm on July 21, and did not issue from it again until after the battle of Gravelines; but in this he is scarcely successful. Burnham, an agent of Walsyngham in the Low Countries, whom Froude cites in proof, says, writing on July 25: "This last tempest forced all the ships of war in these

countries, that lay before Dunkirk and Nieuport, to come in. . . . But this day it is thought they will all go forth again." Kyllygrew, whom Froude also cites, says, on July 31: "I understand that Admiral Justinus is gone out already with thirty sail from Flushing." It is true that, as Froude also points out, Howard himself, writing on the evening of July 29, the day on which the battle of Gravelines was fought, said, "There is not one Flushinger nor Hollander at the seas." But the Dutch fleet, if it was at sea at all, was watching Dunkirk and Nieuport, and of these one is some twelve and the other some thirty miles from Gravelines. On August 6, Seymour, Wynter, and Palmer, writing to the Council, say, "if there were any Flushingers and Hollanders attending about Dunkirk, *as it seemeth by your Lordships' letters that there was;*" and on the same day the States of Zealand addressed a despatch to the Queen, in which they expressly claim "that our fleet, under the charge of Count Justinus of Nassau, being happily arrived and riding off of Dunkirk at the very time of the discovery of the Armada of Spain, the forces of the Prince of Parma, then ready to put to sea, were, by the same, closely locked in and stayed within the said Dunkirk . . . which Prince, although he was ready and his soldiers embarked, he has been and now is so closely locked in by our ships in the havens of Nieuport and Dunkirk, that he will be unable to come out."

It has been necessary to examine this point at some length, because the strategic action and effect of the Dutch fleet have been too often ignored, or, if not ignored, misunderstood by the historians. As a question of evidence, it is still perhaps somewhat uncertain what was the exact position of the Dutch ships at the moment when Sidonia anchored at Calais and sent off message after message, each more urgent than the last, to summon Parma to his rescue. But the uncertainty of the evidence is immaterial to the strategic effect of the Dutch fleet. Parma knew, if Sidonia did not, that until Justin of Nassau

was disposed of, he could not stir. Sidonia had never seen the Dutch ships, and was not seaman enough to know that, whether visible or invisible, they were equally formidable in menace and equally potent in effect. Even Howard saw nothing of them on the day of Gravelines. But Parma had seen them, and knew what they could do, even if he did not know exactly where they were. So long as the weather kept them in the Scheldt, it would keep him in his havens. If it abated so as to allow him to set forth, he knew that wherever they might be at the moment they would pounce upon him like a hawk upon its prey as soon as he had reached the open. Sidonia had summoned him to his rescue against one hostile fleet in the narrow seas. How could he possibly go with another hostile fleet in his rear? He could give no naval assistance to Sidonia. He could, it is true, furnish transport for the contingent carried by the Armada, but such transport would be a hindrance rather than an assistance, unless the seas to be traversed had first been cleared of all opposing naval force. If Sidonia could not cope at sea with Howard, Drake, and Seymour, still less could Parma cope at sea with even Justin of Nassau alone. Before Sidonia could expect to see Parma afloat he must first crush the *endemoniada gente* which had plucked his feathers for a week, and driven him all bedraggled, bewildered, and beleaguered into Calais Roads, and then seek out and destroy Justin of Nassau, who, whether in the Scheldt or in the open, was an absolute bar to Parma's exit. If he could not do that, he could do nothing. To all intents and purposes he had been defeated the moment he dropped anchor at Calais and sent forth his agonized cry to Parma for help. As has often happened in naval history, the overthrow of Gravelines and the headlong flight of the Armada to the North were only the tactical consummation of a conflict which strategy had decided beforehand in favour of the side which had best mastered the secret of sea power.

But Howard and his comrades were by no means content with having paralyzed Parma and brought Sidonia

to bay. Their spirit was that of Achilles, *Nil actum reputans dum quid superesset agendum.* They were plain men and homely strategists, whose one idea of dealing with an enemy was to attack and defeat him. Sidonia was anchored at Calais. They could not attack him in that position, because to do so they must close with him, and for an action at close quarters their strength was insufficient and their ships were not adapted. He had sought cover like a fox when he is hard pressed, and they resolved to force him again into the open. With this object a device was adopted, as some say, on the suggestion of Elizabeth herself, but more probably at the instance of Wynter, whom Howard had summoned with his other lieutenants to a council of war. At any rate, Wynter says himself—

"Having viewed myself the great and hugeness of the Spanish army, and did consider that it was not possible to remove them but by a device of firing of ships, which would make them to leese the only road which was apt and meetest to serve their purpose, as also an occasion to put many of them in danger of firing, and at the least to make them to leese their cables and anchors, which could not be less than two for every ship, I thought it meet to acquaint my Lord withal . . . and his Lordship did like very well of it, and said the next day his Lordship would call a council and put the same in practice."

Accordingly on July 28, eight ships, which were adjudged good for no other purpose, were duly prepared for firing, and at midnight they were set alight and allowed to drift among the Spanish ships at anchor. "This matter," says Wynter, "did put such terror among the Spanish army that they were fain to let slip their cables and anchors; and did work, as it did appear great mischief among them by reason of the suddenness of it." It does not appear that any of the Spanish ships were destroyed or seriously injured by fire. But the main object was to inspire terror, and this was most effectually accomplished. Sidonia never afterwards anchored in security until months later he reached the Peninsula with the shattered remnants of the Armada. There was no longer any question of meeting or waiting

for Parma; all he could do was to gather his fleet together and make sail whithersoever the wind might carry him. It carried him along the coast towards Gravelines, and by daylight Howard, Drake, and Seymour were once more at his heels and upon him. Howard's account of the memorable day, the day of Gravelines, is brief but significant:—

"This morning we drove a galleass ashore before Calais, whither I sent my long boat to board her, where divers of my men were slain, and my lieutenant sore hurt in the taking of her. Ever since we have chased them in fight and distressed them much; but their fleet consists of mighty ships and great strength; yet we doubt not, by God's good assistance to press them. . . . Their force is wonderful great and strong; and yet we pluck their feathers little by little."

Drake, writing on the same day, is equally brief:—

"God hath given us so good a day in forcing the enemy so far to leeward as I hope in God the Prince of Parma and the Duke of Sidonia shall not shake hands this few days; and whensoever they shall meet, I believe neither of them will greatly rejoice of this day's service."

Wynter shall tell the story at greater length. If we reflect that he was only one of many, all of whom quitted themselves as manfully as he did, we shall understand the nature of the struggle and the magnitude of its results:—

"His Lordship, with such as were with him, did bear room after the Spanish fleet, the wind being at the S.S.W., and the Spanish fleet bearing away N.N.E., making into the depth of the channel; and about nine of the clock in the morning we feat near unto them, being then thwart of Gravelines. They went into a proportion of a half-moon. Their admiral and vice-admiral, they went in the midst, and the greatest number of them; and there went on each side, in the wings, their galleasses, armados of Portugal, and other good ships, in the whole to the number of sixteen in a wing, which did seem to be of their principal shipping. My fortune was to make choice to charge their starboard wing without shooting of any ordnance until we came within six score of them, and some of our ships did follow me. The said wing found themselves, as it did appear, to be so charged, as by making of haste to run into the body of their fleet, four of them did entangle themselves one aboard the other. One of them recovered himself, and so shrouded himself among

the fleet; the rest, how they were beaten, I will leave it to the report of some of the Spaniards that leapt into the seas and were taken up, and are now in the custody of some of our fleet.

"The fight continued from nine of the clock until six of the clock at night, in the which time the Spanish army bare away N.N.E. and N. by E., as much as they could keeping company one with another, I assure your Honour in very good order. Great was the spoil and harm that was done unto them, no doubt. I deliver it unto your Honour upon the credit of a poor gentleman that out of my ship there was shot five hundred shot of demi-cannon, culverin, and demi-culverin; and when I was furthest off in discharging any of the pieces, I was not out of the shot of their harquebus, and most times within speech one of another. And surely every man did well; and, as I have said, no doubt the slaughter and hurt they received was great, as time will discover it; and when every man was weary with labour, and our cartridges spent, and munitions wasted—I think in some altogether—we ceased and followed the enemy, he bearing hence still in the course as I have said before."

One more day of agony, a day on which but for a timely shift of the wind the whole of the Spanish fleet must have been cast away on the flats of Holland, completed Sidonia's discomfiture. Howard and his heroes had at last done their work. Their ammunition was spent and their victuals were exhausted, but they followed their flying enemy until they saw that he had no more stomach for fighting, and was fain to get away as best he could by rounding the north of Scotland and braving the storms of the Atlantic sooner than face the *endemoniada gente* again.

"After the fight," says Howard, "notwithstanding that our powder and shot was well near all spent, we set on a brag countenance and gave them chase, as though we wanted nothing, until we had cleared our own coast and some part of Scotland of them. And then, as well to refresh our ships with victuals, whereof most stood in wonderful need, as also in respect of our want of powder and shot, we made for the Frith, and sent certain pinnaces to dog the fleet until they should be past the Isles of Scotland."

The rest of the woeful story belongs to the tragedy of the conflict, not to its strategy. The latter was at an end when the *felicissima Armada*—for such, it appears, and not "Invincible," was its official title in Spain—ceased after

Gravelines to be a fleet in being. Howard had destroyed it strategically; the weather and the sea only completed its material overthrow. *Flavit Deus et dissipati sunt*, which was long accepted as a true and sufficient account of the whole business, is at least approximately true of its final stages. But the theory that it was a Heaven-sent storm, and not the still more divine gift of bravery and brains equal to the occasion, that overthrew the Armada, is, as Professor Laughton well says, as false as it is childish :—

"False because the Spanish fleet, after being hounded up Channel, had sustained a crushing defeat in which they lost many ships and thousands of men before they fled to the North; a defeat so terrible that nothing could induce them to turn on their pursuers; a defeat which forced them to a headlong flight into the unknown dangers of the Northern seas, rather than face the more certain and now known danger of the English shot. Childish, because in affairs of State Providence works by recognized means, and gives the victory not by disturbing nature and nature's laws, but by giving the favoured nation wise and prudent commanders, skilful and able warriors; by teaching their hands to war and their fingers to fight."

Μέγα γὰρ τὸ τῆς θαλάσσης κράτος. This, which is perhaps the first mention of sea power as such in history—it occurs in the first speech of Pericles reported by Thucydides—is the true explanation of the defeat of the Armada by England. It was the growing sea power of England, still unrecognized by the nation and grievously misunderstood by its rulers, that brought the Armada to nought. The men who overthrew Sidonia were not professed strategists. In an age of strenuous action like theirs the practice precedes the theory. Their strategy was implicit and not explicit. The instinct and the experience of consummate but untutored seamanship had taught them all that they needed to know of the strategic secret of the sea. Yet there is scarcely a principle of naval warfare, as interpreted by centuries of subsequent experience, which these men did not implicitly recognize and explicitly illustrate. Act always on the offensive; find the enemy and fight him; make his coast your frontier, and never let him cross it

unchallenged; if you cannot beat him to-day, follow him and fight him to-morrow; if you do not follow him, he is certain, if he knows his business, to follow and fight you when you have lost the advantage of time and place which is half a victory; take no thought of his military enterprises until the naval issue is decided; if you are victorious, or even until you are finally beaten, they cannot be undertaken; if you are beaten, they cannot be impeached,—these, in plain words, are the eternal maxims of the strategy that makes for sea power. It is because Howard and his comrades understood and applied them, and Philip and Sidonia did not, that the heritage of the world's sea power was taken from Spain and given to England in 1588. It is because these lessons, though often neglected by the English people and their rulers, were never forgotten by English seamen, that the sea power of England grew without ceasing from that time forward until it was finally made supreme at Trafalgar by the genius and patriotism of Nelson. No man can say how soon or how stoutly it may be challenged again. Inspired with the memories and the lessons of that rich and splendid history which began at Gravelines and ended at Trafalgar, English seamen may be trusted never to be unworthy of their sires in daring, in endurance, in the noble traditions of naval discipline and obedience, and above all in that native capacity to understand and apply the secret of the sea which is at once the sign and the sanction of supreme sea power. But for the nation and its rulers the story of the Armada is fraught with a solemn warning. Howard and his comrades saved Elizabeth in spite of herself. From first to last she never understood that the sea was her sole salvation. If the people of England ever allow themselves to forget what Elizabeth never knew, the sun of their naval glory will set for ever. "Sparing and war have no affinity together."

J. R. T.

CAPTAIN MAHAN'S WRITINGS.*

EVER since the publication, in 1890, of his masterly work on "The Influence of Sea Power upon History," Captain Mahan, of the United States Navy, has been recognized by all competent judges, not merely as the most distinguished living writer on naval strategy, but as the originator and first exponent of what may be called the philosophy of naval history. "Historians generally," as he said, "have been unfamiliar with the conditions of the sea, having as to it neither special interest nor special knowledge; and the profound determining influence of maritime strength upon great issues has consequently been overlooked. . . . It is easy to say in a general way that the use and control of the sea is and has been a great factor in the history of the world; it is more troublesome to seek out and show its exact bearing at a particular juncture. Yet unless this be done the acknowledgment of general importance remains vague and unsubstantial; not resting, as it should, upon a collection of special instances in which the precise effect has been made clear, by an analysis of the conditions at the given moments." It is, indeed, not a little singular that our own splendid naval history, the most conspicuous and continuous illustration of sea power and its influence that the world has ever witnessed, has never attracted a native writer to treat it in the comprehensive and philosophical spirit of which Captain Mahan has given us so signal and so unique an example. Some

* *Times*, April 1, 1893.

indeed of our earlier naval historians went to the root of the matter, but few of our great writers on history have displayed any considerable insight into sea power as such. Some of them have entirely ignored it, and have often completely misrepresented such examples of its manifestation as have inevitably found their way into the general course of their narrative. The popular instinct and the policy of statesmen have indeed been less at fault. The stern discipline of actual war could not fail to determine both in substantially the right direction. It was by sea power that the elder Pitt built up the British Empire, and by sea power that his illustrious son preserved it from overthrow. Alone among the nations of Western Europe England remained unconquered by Napoleon, and finally destroyed him. Wellington, as every one knows, was one of the immediate instruments of his overthrow, but few go on to reflect that the great Wellington himself was but the creature and the instrument of sea power. It was command of the sea that alone gave him access to the Peninsula and enabled him there to maintain the armies that finally subdued France. Hence, if the popular instinct places the hero of Trafalgar on a higher pinnacle than even the hero of Waterloo, it is hard to say that it is at fault. Nelson stands as the symbol and embodiment of that one element of national strength against which the genius of Napoleon spent itself in vain. That element is sea power, as understood and expounded by Captain Mahan, who may, perhaps, have borrowed the term from Thucydides, but is certainly the first modern writer of note who has grasped and interpreted its full meaning. What we learn from Captain Mahan's pages is that, to a country like England, commercial, expansive, and maritime, sea power is not merely an incidental element of national strength, but the very foundation of its being; that it is as impossible for England not to be the dominant naval Power of the world, as it is for Germany not to rely on the armed manhood of the nation organized for territorial defence.

It will be said, perhaps, that this is merely a truism.

Yet how many among us are there who have ever practically realized the true bearing and purport of this truism? How many of our historians have ever regarded the national history, to say nothing of the history of the world, from this particular point of view? Dr. Arnold, as Captain Mahan has observed, notes the parallel between the overthrow of Hannibal by Rome and the overthrow of Napoleon by England, and Sir Edward Creasy presses the coincidence further, pointing out that Spain was, in both cases, the country in which the decisive campaigns were initiated. But neither writer discerned the essential feature of the parallel, namely, that in both cases the mastery of the sea belonged to the victor, and was the determining factor of his final victory. Or, to take another instance from history not our own, Bacon has noted the fact that "the battle of Actium decided the empire of the world; the battle of Lepanto arrested the greatness of the Turk." "How did it happen," asks Captain Mahan, pertinently enough, "that in two great contests between the powers of the East and of the West in the Mediterranean, in one of which the empire of the known world was at stake, the opposing fleets met on spots so near each other as Actium and Lepanto? Was this a mere coincidence, or was it due to conditions that recurred, and may recur again?" So far as we are aware, no historian has either noted the coincidence or attempted an explanation of it. Again, we may ask, with Captain Mahan, "How many look upon the battle of Trafalgar, the crown of Nelson's glory and the seal of his genius, as other than an isolated event of exceptional grandeur? How many ask themselves the strategic question, 'How did the ships come to be just there?' How many realize it to be the final act in a great strategic drama, extending over a year and more, in which two of the greatest leaders that ever lived, Napoleon and Nelson, were pitted against each other? At Trafalgar it was not Villeneuve that failed, but Napoleon that was vanquished; not Nelson that won, but England that was saved. And why? Because Napoleon's

combinations failed, and Nelson's intuitions and activity kept the English fleet ever on the track of the enemy, and brought it up in time at the decisive moment." Very few historians have ever realized this, though it is well known to students of naval strategy; and so completely was it hidden from the statesmanship of the time that Pitt was far more depressed by the disaster of Austerlitz than he was elated by the triumph of Trafalgar. It is true that Austerlitz might bear down the spirit of Austria, which had more than once before made peace with the conqueror on its own account, and left England to resist him alone; but it could not break the power of England. If Napoleon boasted, vainly enough, that he would conquer India on the banks of the Vistula, he must have known that his power to do so was gone for ever when Villeneuve, baffled by Nelson, and defeated but not destroyed, as he should have been, by Calder, turned southward to Cadiz instead of joining hands with Ganteaume at Brest, where Cornwallis, by a strange lapse of strategic insight, was just upon the point of dividing his powerful fleet and rendering each of its squadrons inferior to the adversary. "What a chance has Villeneuve missed!" wrote Napoleon, for once displaying a sounder judgment than the great sailors whom he never could vanquish. "He might, by coming upon Brest from a wide sweep to sea, have played hide-and-seek with Calder, and fallen upon Cornwallis; or else, with his thirty ships, have beaten Calder's twenty, and gained a decided preponderance." It was then that Napoleon abandoned his long-cherished plan of invading England, and gave immediate orders for the campaign of Austerlitz. England was saved, in fact, before Trafalgar was fought. The strategic game was played out and won when Nelson, having followed and outstripped Villeneuve in his return from the West Indies, handed over his ships to Cornwallis and returned to England himself. Trafalgar might never have been fought if Villeneuve had not been goaded into giving battle by the charge of cowardice and by his impending supersession by Rosily But Napoleon, though

deficient, as one of his French critics has observed, in *le sentiment exact des difficultés de la marine*, was rarely at fault in his estimate of the broad issues of strategy, naval as well as military. He knew well enough that he was foiled in his scheme for invading England before Trafalgar was fought. Some writers have thought that he spoke the truth for once when he told Metternich that the army assembled at Boulogne was always an army against Austria. So it was, in a sense. If he could once have established himself on English shores, with the army of Boulogne intact and the British fleet destroyed, Austria would have troubled him no more. The conquest of England would have given him the dominion of the world. But in no other sense was the army assembled at Boulogne for the purpose of the Austerlitz campaign. That was merely a second string to his bow, to be used only in case the first was rendered unavailable by the genius of Nelson and the naval prowess of Great Britain. In this he was far wiser than Pitt, who saw in Trafalgar no sufficient compensation for Austerlitz.

Felix qui potuit rerum cognoscere causas! Many historians have told us the splendid tale of England's naval exploits and illustrated the superb steadfastness of her immortal heroes of the sea. Writers like Admiral Colomb have deduced from the narrative the broad and immutable principles of naval strategy. But Captain Mahan is more historical than the strategists, more strategic than the historians, and more philosophical than either. At best the historians, where they have not misconceived the conditions of naval warfare altogether, have regarded it rather as an auxiliary and subordinate element of military strategy than as an independent and co-ordinate, if not supreme, factor in determining the course of history and the fate of nations. Captain Mahan pursues an entirely different and far more philosophical method. He analyzes sea power, its sources, its conditions, and its results. His main purpose is to draw lessons of profit for the people of the United States, to show them what they must aim at, and how they must pursue their aims, should the

occasion ever again arise in their history for the employment of "statesmanship directing arms." But incidentally he has been compelled by the necessity of the case to examine almost exclusively the naval history of this country, and to do so in the light, not merely of scientific strategy, but of a searching analysis of the causes and conditions which have made for sea power in the case of England. His first work applied this fruitful and instructive method to the naval history of Europe from 1660, when the sailing ship era, with its distinctive features, had fairly begun, to 1783, the end of the American Revolution. The book was at once recognized as a new departure in naval history, and English readers could only regret that the brilliant pen which had analyzed so skilfully the naval campaigns of Hawke, Howe, and Rodney, of Suffren, De Guichen, and De Grasse, had been laid down before it had reached the heroic period of St. Vincent and of Nelson, and the tremendous drama of the struggle of England against the dominion of Napoleon. Captain Mahan has since removed this cause of regret. His second work deals exclusively with the wars of the Revolution and the Empire, and from the nature of the case it is even more interesting, and not less instructive, than its predecessor. His touch is as firm, he paints on a larger canvas, and his grasp, alike of incident and principle, is not less masterly. The later work ends at the year 1812, "a date signalized," as he suggestively says, "by Napoleon's invasion of Russia, which wrecked his empire —or, at least, gave the outward and visible token of the wreck—and also by the outbreak of the war between Great Britain and the United States. To the latter, as a subject of particular national interest, the author hopes in the near future to devote a special study." When this latter work is published we shall have a complete survey of the whole course of naval warfare in the sailing ship era, from the pen of the first writer who has seen the problem steadily, and seen it whole, of the influence of sea power upon history.

The history of the wars of the Revolution and the Empire has generally been written from the point of view of the statesman and the soldier. The naval historian has been content to dwell on the glories of the First of June, of St. Vincent and Trafalgar, of the Nile and of Copenhagen, without seeing more than their immediate relation to the European military situation. What the historian, naval and general, has for the most part failed to perceive is that from 1793 to 1815 the sea power of England was the one solid barrier which the Revolutionary and Napoleonic deluge failed to submerge, as it spread in a devastating flood over the whole of Western Europe, and at one time threatened to assume the proportions of a universal cataclysm. It is his profound grasp of this great, but hitherto imperfectly apprehended, truth that gives to Captain Mahan's pages a unity at once intensely dramatic and profoundly scientific, and enables him to display the great central episode of the campaign which ended at Trafalgar as, alike in its immediate issues and its ulterior results, unquestionably the most decisive campaign in modern history. It is true that those ulterior results were not to be realized for many weary and devastating years. It was with a truly prophetic instinct that Pitt exclaimed, as his eye rested on a map of Europe, when a few days before his death he entered his villa at Putney for the last time, "Roll up that map; it will not be wanted these ten years." It was not wanted for hard upon ten years to come. But, in spite of all that was happening then at Ulm, at Austerlitz, and at Vienna, in spite of all that was destined to happen in the Peninsula, at Moscow, and at Waterloo before the map of Europe could be finally settled at the restoration of peace to the world, Pitt, if his faith and insight had been those of his own prime, and worthy of his country and its sea power, might there and then have placed one finger on the site of Napoleon's camp at Boulogne and another on the scene of Nelson's death at Trafalgar, and said, "Here and now is Napoleon vanquished; here and now is a barrier set to his

power and his designs, which, so long as England remains a nation, shall never be cast down."* No one has ever shown this more clearly or more conclusively than Captain Mahan. If Napoleon was to succeed, England must be vanquished; England could only be vanquished, as the other Powers of Europe had been vanquished, by successful invasion; and Napoleon was far too consummate a master of the art of war not to know that England could never be successfully invaded unless her fleets had first been scattered and overthrown. The enterprise was a desperate one in any case; but, in certain contingencies and on certain conditions, it might have been successful, as Captain Mahan acknowledges:—

"Nevertheless, there remained to Napoleon enough chances of success to forbid saying that his enterprise was hopeless. A seaman can scarcely deny that, despite the genius of Nelson and the tenacity of the British officers, it was possible that some favourable concurrence of circumstances might have brought forty or more French ships into the Channel, and given Napoleon the mastery of the Straits for the few days he asked. The very removal of the squadrons of observation from before Rochefort and Ferrol, in order to constitute the fleet with which Calder fought Villeneuve, though admirable as a display of generalship, shows that the British Navy, so far as numbers were concerned, was not adequate to perfect security, and might, by some conceivable combination of circumstances, have been outwitted and overwhelmed at the decisive point.

"The importance attached by the Emperor to his project was not exaggerated. He might, or he might not, succeed; but if he failed against Great Britain, he failed everywhere. This he, with the intuition of genius, felt; and to this the record of his after history now bears witness. To the strife of arms with the great

* Nevertheless it seems probable that Pitt did foresee the salvation of Europe, and even foretold some of its circumstances. As Lord Rosebery finely says, "Even in the wreck of his life, his intrepid foresight survived. Nothing, he said, but a war of patriotism, a national war, could now save Europe, and that war should begin in Spain." Lord Acton has characterized this prediction as one of the most astounding in history. Mr. Gladstone, on the other hand, has declared that he "sees nothing wonderful" in it. Its anthenticity has lately been called in question, and is still the subject of controversy. I had certainly overlooked it when the passage in the text was written.—J. R. T.

sea power succeeded the strife of endurance. Amid all the pomp and circumstance of the war which for ten years to come desolated the Continent, amid all the tramping to and fro over Europe of the French armies and their auxiliary legions, there went on unceasingly that noiseless pressure upon the vitals of France, that compulsion, whose silence, when once noted, becomes to the observer the most striking and awful mark of the working of Sea Power. Under it the resources of the Continent wasted more and more with each succeeding year; and Napoleon, amid all the splendour of his Imperial position, was ever needy. To this, and to the immense expenditures required to enforce the Continental system, are to be attributed most of those arbitrary acts which made him the hated of the peoples, for whose enfranchisement he did so much. Lack of revenue and lack of credit, such was the price paid by Napoleon for the Continental system, through which alone, after Trafalgar, he hoped to crush the Power of the Sea. It may be doubted whether, amid all his glory, he ever felt secure after the failure of the invasion of England. To borrow his own vigorous words, in the address to the nation issued before he joined the army, 'To live without commerce, without shipping, without colonies, subjected to the unjust will of our enemies, is to live as Frenchmen should not.' Yet so had France to live throughout his reign, by the will of the one enemy never conquered."

To the consequences, maritime and strategic, of Trafalgar, and to the commercial policy which it successively compelled both combatants to adopt, Captain Mahan devotes two of his most original and instructive chapters, the drift and teaching of which may be best expounded in his own striking words:—

"Napoleon's scheme for the invasion of Great Britain, thwarted once and again by the strategic difficulties attendant upon its execution, was finally frustrated when Villeneuve gave up the attempt to reach Brest and headed for Cadiz. On the part of the allies Trafalgar was, in itself, a useless holocaust, precipitated in the end by the despair of the unfortunate admiral, upon whose irresolution Napoleon not unjustly visited the anger caused by the wreck of his plans. Villeneuve was perfectly clear-sighted and right in his appreciation of the deficiencies of his command — of the many chances against success. Where he wretchedly failed was in not recognizing the simple duty of obedience—the obligation to persist at all hazards in the part of a great scheme assigned to him, even though it led to the destruction of his whole force. Had he, upon leaving Ferrol,

been visited by a little of the desperation which brought him to Trafalgar, the invasion of England might possibly—not probably—have been effected.

"An event so striking as the battle of Trafalgar becomes, however, to mankind the symbol of all the circumstances—more important, perhaps, but less obvious—which culminate in it. In this sense it may be said that Trafalgar was the cause—as it certainly marked the period—of Napoleon's resolution to crush Great Britain by excluding her commerce from the Continent. Here, therefore, the story of the influence of Sea Power upon this great conflict ceases to follow the strictly naval events, and becomes concerned simply with commerce-destroying, ordinarily a secondary operation of maritime war, but exalted in the later years of Napoleon's reign to be the principal, if not the sole, means of action.

"To this the two next chapters are devoted. Of these, the first deals with commerce-destroying in the ordinary sense of the words, directed against enemies' property on the high seas; beginning with the outbreak of war in 1793, and narrating the series of measures by which the Republic sought to break down British commerce and foreshadowed the policy of Napoleon's Berlin and Milan decrees. The second begins with the Berlin decree in 1806; and, tracing one by one the steps which carried the Emperor from violence to violence, seeks to show how these found their necessary outcome in the Russian expedition and the fall of the Empire. Detached thus, as far as may be, from the maze of contemporary history in which they are commonly lost, these successive acts of the French Government are seen to form a logical sequence, connected by one motive and dominated by one necessity. The motive is the destruction of Great Britain, the necessity that of self-preservation. Each nation, unassailable on its own element, stood like an impregnable fortress that can be brought to surrender only by the exhaustion of its resources. In this struggle of endurance Napoleon fell."

We are induced, alike by the immensity of the subject and the novelty of its treatment, to dwell mainly on the broad outlines of Captain Mahan's work and the broad features of his method, without attempting to follow his masterly exposition in detail. The latter is the less necessary, perhaps, because the character of the book and the reputation of its author will inevitably and immediately commend it to the attentive study of all who concern themselves seriously with the history of their country and the true conditions of its prosperity and security. By the

professional student of naval warfare, moreover, whether in its strategical or its tactical aspects, the book will at once be recognized as an altogether indispensable text-book; for, while his grasp of strategic issues is almost unrivalled, and his insight into the philosophy of naval history is altogether unprecedented in naval literature, Captain Mahan never loses an opportunity of pointing the tactical moral wherever the nature of his subject-matter permits or invites him to do so. His luminous exposition abounds in these incidental digressions and illustrations, which give life to his pages and variety to his narrative, while shedding a flood of suggestive light on many of the still unsolved problems of modern naval warfare. It would be easy to fill many a page with extracts bearing upon this point, and not a few more with illustrations of Captain Mahan's sustained force of style and felicity of literary exposition. But we prefer to treat his great work from a central point of view, and to dwell upon its fundamental characteristics; and we must content ourselves with saying, in conclusion, that, though it might be an exaggeration to compare him with Adam Smith for reach of thought, profundity of insight, and sagacity of speculation, yet it is no more than the truth to say that the spirit in which he has approached the novel and fruitful study of the "Influence of Sea Power upon History" is not unworthy to be compared with that in which the great Scottish thinker approached the study of the "Wealth of Nations."

J. R. T.

THE JEUNE ÉCOLE FRANÇAISE.*

A WRITER in *La Marine de France*, the recognized organ of what is known to students of French naval literature as the *jeune école française*, called attention at the time to the fact that, as he alleged, the Italian Naval Manœuvres of 1893 were avowedly based on the views propounded in "Les Guerres Navales de Demain," a work published in 1892 by two distinguished leaders of that school, Commandants Z—— and H. Montéchant, whose "Essai de Stratégie Navale" is the accepted text-book of the school.

Assuming that the naval war of the future will be mainly a war of coasts, the writers in question seem to think that the problems it presents will be comparatively simple of solution. Both propositions are open to considerable dispute. Neither can be accepted without large reservations and limitations. An Italian critic of the same manœuvres, writing in *l'Italia Militare e Marina*, accepted the first and disputed the second. He was perhaps too much absorbed in the naval situation of his own country. It is probable enough that a war between Italy and any other naval Power in the Mediterranean would be, if not essentially a war of coasts, at least capable of being represented as mainly a war of coasts. But this results rather from the geographical situation and relations of the Powers supposed to be in conflict on the sea than from any recent development of the principles of naval strategy or from any recent changes in the methods and appliances of naval

* *Naval Annual*, 1894.

warfare. All naval warfare involves territorial enterprise, or, at any rate, freedom to undertake territorial enterprise without maritime impediment, as its ulterior end. No Power seeks to command the sea except for the purpose of traversing it in security; and there is no principle more firmly established by the whole course of naval history than this, that in time of war the sea cannot be traversed in security either for military or for commercial purposes unless the Power which seeks to traverse it has established a strategic command over it. If these views are sound, it follows that, although a naval war between Italy and another Mediterranean Power is capable of being represented as a war of coasts—because the Mediterranean is, so to speak, all coast, and neither Power would be likely at the outset to attack the extra-Mediterranean possessions of the other—yet it would really be a struggle for the command of the sea affected by the operations. As such its operations would be governed by those broad principles of naval strategy which are essentially immutable, being inherent in the nature of things, and not by any narrower considerations specially founded on the incidents and conditions of a so-called war of coasts. Only in the sense that territorial enterprise across the seas is the final cause of all maritime conflict can naval warfare in any case be regarded as a war of coasts; and whether the coasts to be reciprocally assailed and defended are separated by a few miles or by half the circumference of the globe, the command of the sea between them is essential to the successful attack of either, though not, perhaps, in like measure, to their successful defence. In other words, any Power which seeks to assail another across the sea, but not on the sea, must first secure the command of the sea which separates its own shores from those of its enemy, as a condition precedent of such military enterprise as it contemplates. The ulterior success of the enterprise then becomes for the most part a military and not a naval problem, and depends, as such, not on the naval strength of the Power assailed, which *ex hypothesi* will have disappeared or been rendered strategically of no account,

but on the relative military strength and capacity of the two combatants. Thus from one point of view we may call naval warfare a war of coasts; from another, a struggle for the command of the sea. But to call it a war of coasts is merely to describe it by one of its geographical accidents; to call it a struggle for the command of the sea is to define its essential nature.

It is surely a strange misreading of history for any of the countrymen of Persano to regard their Naval Manœuvres from the point of view of a so-called war of coasts. The disastrous experience of Lissa must have taught them that a war of coasts undertaken in defiance of the historic principles of naval strategy is certain to end in disaster. On the other hand, it is doubtless a sound instinct which leads them to study the naval problems which would arise in the event of a war between Italy and France. This they appear to do without the slightest disguise. Of course England and France do exactly the same thing, and though some disguise is occasionally attempted, it never deceives any one. Each pays the other the compliment of thinking it the only Power capable of contending against itself at sea, and each makes its dispositions accordingly. In like manner, Italy must regard France as its only formidable naval rival in the Mediterranean, and must consider how the undoubted superiority of France at sea might best be dealt with by the Italian Navy in the event of war. This, with all respect for the *jeune école* and its partisans, is the real naval problem which Italy has to study, and not the untested strategy of a new-fangled *guerre des côtes*.

The plain truth is, however, that whatever the critics of the *jeune école* may have thought and said, the Italian naval authorities in drawing up the scheme of the manœuvres of 1893 based it upon the old-fashioned and time-honoured principles of naval strategy as established by history and experience, and not upon any principles peculiar to the *jeune école*. This will be seen at once from the following summary of the plan of operations which is

taken from a narrative contributed by Commander Garbett, R.N., to the journal of the Royal United Service Institution :—

The attacking squadron (supposed to be French), under the command of H.R.H. the Duke of Genoa.

1st Division—
Battleships: *Lepanto* (flag), *Ruggiero di Lauria.*
Torpedo-cruiser: *Euridice* and *Monzambano.*
Torpilleurs-de-haute-mer: 103, 111, 114, and 131

2nd Division (Rear-Admiral Corsi)—
Battleships: *Italia* (flag), *Andréa Doria.*
Torpedo-cruiser: *Iride.*
Torpilleurs-de-haute-mer: 123, 124, 125, and 126.

3rd Division (Rear-Admiral Gonzales)—
Battleships: *Dandolo* (flag), *Affondatore.*
Torpedo-cruiser: *Goito.*
Torpilleurs-de-haute-mer: 57, 62, 115, and 155.

The torpedo-avisos *Aquila*, *Sparviero*, and the *Tevere*, cistern-ship, were also attached to this squadron.

The defending force, under the command of Vice-Admiral Accini :—

1st Division—
Battleships: *Re Umberto* (flag), *Duilio.*
Torpedo-cruiser: *Minerva.*
Torpilleurs-de-haute-mer: 59, 65, 72, and 94.

2nd Division (Rear-Admiral Puliga)—
Battleship: *Castelfidardo* (flag).
Protected cruiser: *Stromboli.*
Torpedo-cruiser: *Urania.*
Torpilleurs-de-haute-mer: 71, 73, 74, and 137.

3rd Division (Rear-Admiral Marra)—
Protected cruisers: *Fieramosca*, *Vesuvio.*
Torpedo-cruiser: *Aretusa.*
Torpilleurs-de-haute-mer: 76, 77, 91, and 139.

The torpedo-avisos *Falco*, *Avvoltoio*, and the cistern-ship *Pagano*, were also attached to this squadron. In addition, twenty-four first-class torpedo-boats were commissioned, to assist in the defence of the various ports.

The limits of the manœuvre field were fixed by the coast from Ventimiglia to Campanella, in the south of the Gulf of Naples, then by a line drawn from Campanella to the Trapani Islands, from the Trapani Islands passing twenty miles south of Sardinia; the fourth line was made by the meridian of Ventimiglia.

These limits comprised all Sardinia: the N.E. coast, including Maddalena, was considered Italian soil; the ports on the west coast served as the base of operations for the attacking squadron under the Duke of Genoa.

The attacking force had the superiority over that of the defence, both in battleships and armament, but the defending ships had the advantage in point of speed.

The programme of the manœuvres was divided into three phases.

In the first, from August 5 to the 15th, the attacking squadron had as its object to attempt to force the defending fleet to a decisive action, in order to gain the command of the Tyrrhenian Sea; while the latter, avoiding a battle, was, at the same time, to prevent the enemy from ravaging the coast.

Genoa, Spezzia, and Maddalena were considered so strong that the enemy could make no effective attack against them.

In the second phase of the manœuvres, lasting from August 16 to the 26th, the offensive squadron had to atttack the defending force, which was anchored in an open harbour for the purpose of making good repairs. The defending ships on their side were to attempt to escape, and putting to sea to re-form and then take refuge in a better defended port, from whence they could continue to harass the enemy.

In the third phase, between August 27 and September 6, the hostile squadron had to escort a large convoy of troops, which were destined to be disembarked on the coast of Italy. The convoy at sea was to form a large square, the war-ships forming the angles. The speed was necessarily less than the usual speed of the squadron.

The object of the defending force was to find and attack the squadron at sea, so as to prevent the disembarkation from being effected.

The attacking squadron was conveniently designated A and the defending squadron D. A was at Vado when the first phase of the operations began on August 9, and D distributed between Porto San Stefano and Porto Ferrajo. Accini's first move was to send out all his cruisers to scout for the enemy, keeping only his battleships and torpedo-boats in port. The Duke of Genoa also sent out his cruisers, some to scout and some to sever the telegraphic communication between Sardinia and Italy, and destroy a railway bridge on the coast of Tuscany, proceeding with his main body along the north coast of Italy to carry out

coast-wise operations against railways, telegraphs, signal-stations, and the like, but taking care to give Genoa a wide berth. While he was thus engaged with two divisions, the third being employed in scouting and covering his seaward flank, the *Aquila* reported on the morning of the 10th, that the enemy had been sighted to the eastward with a squadron of eight ships, and this was presently confirmed by the *Monzambano*, which had been despatched on an independent raiding expedition. The Duke of Genoa thereupon at once abandoned the operations on which he was engaged, and forming his fleet in order of battle, proceeded to the southward in pursuit of the enemy. This was exactly what Accini wanted; to draw his adversary away from the shore and if possible to entangle him in the narrow waters between the Tuscan islands and the coast, where torpedo-boats could operate to best advantage. The Duke, however, was not to be led into this trap. He kept in the open during the night, shaking off the enemy's observation, and on the morning of the 11th appeared off Civita Vecchia, which he proceeded to bombard. Accini, on the other hand, having lost touch of his adversary, remained for the night at Giglio, where he reassembled his forces. In the morning he sent his third division out to scout, and steaming towards the land, himself received at ten a.m. from the signal-station at Monte Argentaro the information that the enemy had been sighted steaming towards the Roman coast. He accordingly shaped a course for Civita Vecchia with the object of interrupting the bombardment. In this he was successful. As soon as the Duke of Genoa perceived his approach, he suspended his fire at the town and formed his fleet for the purpose of attacking Accini. The latter being inferior in strength could fight no action, but he had carried out his immediate purpose of drawing off his adversary, and having done so, he steamed away again at full speed, the Duke following in pursuit. Accini, having a general superiority of speed, made good his escape, and drawing the Duke away in pursuit, was at least partially and temporarily successful

in frustrating the bombardment of Civita Vecchia; which, however, the Duke subsequently resumed by detaching the *Affondatore* and the *Dandolo* for the purpose as soon as Accini was seen to be in full retreat. At this point an armistice was declared, the Duke returning to one of his ports in Sardinia and Accini proceeding to Naples, as if to repair damages, and take in stores, while the cruisers and torpedo-boats of each side were permitted to observe the movements of the other.

It will scarcely be denied that in this series of operations the *guerre des côtes* had shown itself to very little advantage. Accini, though unable to try direct conclusions with his adversary, had twice shown his capacity to control that adversary's movements. It is quite impossible to determine the precise strategic value of demonstrations from the sea against railways, telegraphs, signal-stations and the like, but it is safe to say that the conditions in which they can attain to decisive importance must be more or less exceptional, and that the value of maritime attack on land fortifications properly constructed and vigorously defended is very apt to be overrated. There is no war without casualties, no making of omelettes without breaking of eggs; but the fact remains that both the Duke of Genoa's undertakings were interrupted, if not frustrated, by an inferior defending force, and that the close of the operations left the strategic situation very much as it was at the outset.

Two days later, on August 13, Accini recalled his scouts, and concentrated his force for the defence of Gaeta and Naples. The next evening the enemy was reported in the offing, and Accini found himself caught in a trap. It was too late for him to weigh anchor and escape, and early in the morning the Duke of Genoa, entering the Bay of Naples with his whole force, compelled Accini's surrender in accordance with the rules. The accounts at this point are so vague, that it is not easy to understand how this result was brought about. If the armistice established on the evening of the 11th was formally

concluded before the Duke of Genoa put to sea again, it is natural to suppose that Accini would be equally free to put to sea at the same time. Having neglected to do so, it is strange that he should have failed to surround his anchorage with cruisers and look-outs which might have warned him of the enemy's approach in time to enable him to make his escape. It is odd, again, that, being apprized of the proximity of the enemy in the evening, he should have made no use of his torpedo boats, thirty-four in number, against only fourteen of the enemy, during a night which is stated to have been very dark and somewhat foggy. When the morning came these torpedo boats were employed in somewhat bizarre fashion, according to English ideas, to impede the advance of the attacking fleet, Accini weighing at the same time with his battleships and endeavouring to get away. But the Duke of Genoa was now too close upon him, and his hitherto successful and well-inspired strategy was brought to an ignominious conclusion. This incident, as described, appears to afford very little strategic instruction. Without knowing the precise causes of Accini's unaccountable failure to detect the enemy's approach in time to secure his own line of retreat, it is impossible to determine how far they were such as are likely to operate with similar disastrous effect in actual warfare. As matters stand, the proceedings wear an air of unreality, and suggest the suspicion that, for reasons possibly rather political than strategic, the result was in some way pre-ordained.

In the second phase of the manœuvres Accini's squadron D was anchored, as if for repair, at Gaeta, a more or less unfortified anchorage supposed to be accessible to a powerful attacking squadron. Measures were taken to improvise shore defences, and were doubtless valuable as exercises; but, as these do not seem materially to have effected the naval result, they need not be closely examined. The anchorage was closed by an immense boom, in which only two passages were left, a northern and a southern, each of which was covered by a shore

battery, and illuminated on the night of the operations by a powerful beam from a search-light. The roadstead was sown with mines, torpedo-boats and other light craft patrolled the neighbourhood of the boom, and the *Aretusa* and *Minerva* were told off to scout in the offing and to watch for the enemy, who was expected to come from the direction of Naples, the night on which the attack was to be made, that of August 22, having been determined and made known beforehand. At nine p.m. Accini ordered his squadron to prepare for sea, and at the same time the approach of the enemy was signalled. An hour later an action was in full progress. The defending cruisers were driven back within the boom, but the torpedo-boats remained outside to oppose the enemy's advance. How far they were successful must be purely a matter of conjecture, since the accounts seem to imply that no torpedoes were discharged, and unless this is done, and the results are sifted and recorded, the operations of torpedo-boats in manœuvres must always be totally devoid of actuality. A portion of his squadron was detached by the Duke of Genoa to attempt to destroy the boom while he led the remainder direct for the southern entrance. This led in the one case to a furious cannonade from the shore, and in both to a sustained onslaught of the defending torpedo-boats, which was held to have checked the enemy's attempt to force the passage. At a preconcerted moment all the search-lights of the defence were suddenly and simultaneously extinguished, and while the engagement was still hotly carried on in the neighbourhood of the south passage the *Re Umberto* and the *Stromboli* slipped out through the north passage unperceived and got away to seaward. Shortly afterwards Accini ordered the *Duilio*, the *Fieramosca*, and the *Castelfidardo* to slip their cables and proceed to sea through the southern passage, which by this time was clear, the enemy having been forced back by the defending torpedo boats. This squadron also got clear away without being molested or detected, and subsequently rejoined its consorts at a preconcerted rendezvous.

Thus the second game of the rubber was scored by the D squadron, but the accounts are too meagre for a detailed estimate of the relative skill of the players. There would seem to be many elements of unreality in the operations as described. What is certain is that Accini got away unperceived with the main body of his squadron, and as this was his primary object, his success was so far incontestable. But the operations of the Duke of Genoa are not entirely intelligible. The port in which Accini had taken refuge was supposed to be one not capable of sheltering him against the attack of his adversary. But this being so, there seems to be no reason why the Duke should have allowed himself to be forced back at the critical moment, thus leaving the way open for Accini's escape—unless, indeed, we assume that the official conventions required him to give way before the onslaught of a given number of torpedo-boats. But in that case the plan of operations would seem to have been not very judiciously nor even very fairly framed. If the result was to be determined by the mere presence of a given number of torpedo-boats in a position favourable for attack, then the issue was practically decided in Accini's favour at the outset by giving him the required number of torpedo-boats. If, on the other hand, the result was to be determined by the actual performances of the torpedo-boats, we can form no judgment on the matter without knowing exactly and in detail what those performances were. In any case it is remarkable, perhaps, that no attempt was made by the Duke of Genoa to destroy the boom, and having destroyed it to steam straight for Accini's ships at anchor. A boom must be very strong indeed if it is to stop or damage a battleship steaming against it at full speed. During the operations at Berehaven in 1885 the anchorage was protected by means of a double boom formed of the spars of the ships of the squadron—the *Lord Warden*, the *Agincourt*, the *Minotaur*, the *Iron Duke*, the *Sultan*, and others, all at that time ships heavily rigged and sparred—a five-inch steel hawser being rove along each boom and set up taught

by means of kedges. This formidable obstruction was attacked by the *Polyphemus*. There were no mines outside the boom, but the ship was to defend herself against six torpedo-boats. The result is recorded in the *Naval Annual* for 1886. "The *Polyphemus* steamed two miles outside the entrance, and then turned and charged the booms at a speed of seventeen knots. She eluded the torpedo-boats which were pursuing her by manœuvres which were commended by the umpire as admirable and extremely skilful. She succeeded in avoiding the nine or ten torpedoes, which were discharged at her, struck the boom at right angles, and went through it and the five-inch steel hawser, by which it was secured, as if it were packthread. Not the slightest shock was perceptible on board." Many considerations may have prevented a repetition of this performance by any of the ships of the Duke of Genoa's squadron. But there can be little doubt that such things will be frequently attempted in actual warfare and will not unfrequently be successful.

For the third phase of the operations the two squadrons were differently constituted. Squadron D, under Accini's command, was now reduced to one battleship, the *Re Umberto;* three cruisers, the *Stromboli*, *Aretusa*, and *Minerva;* two "torpedo-avisos," the *Nibbio* and *Avvoltoio*, and twenty-two torpedo-boats, and was stationed at Spezzia. Squadron A, under the Duke of Genoa, consisted of eight battleships, the *Italia*, *Lauria*, *Dandolo*, *Duilio*, *Doria*, *Lepanto*, *Castelfidardo*, and *Affondatore;* six cruisers, the *Vesuvio*, *Fieramosca*, *Monzambano*, *Euridice*, *Iride*, and *Urania;* two "torpedo-avisos," *Aquila* and *Sparviero;* twenty-six torpedo-boats, and four vessels without fighting value, to mark the four angles of the area supposed to be occupied by the transports. The head-quarters of squadron A were at Maddalena. The Duke's first move was to send out the *Euridice*, *Iride*, *Urania*, *Aquila* and *Sparviero*, together with four torpedo-boats, at full speed to explore, on the one hand, the neighbourhood of Elba and the Piombino Channel, between Elba and the mainland, and, on the

other, the roadstead of Gaeta and the bay of Naples. The remainder of the squadron was distributed into four divisions, one of which, the *Lepanto*, with a contingent of torpedo-boats, remained at the disposition of the Commander-in-Chief, while the rest, consisting of (1) the *Italia* and *Lauria*, (2) the *Dandolo* and *Duilio*, and (3) the *Doria* and *Fieramosca*, each with a contingent of torpedo-boats, were despatched in the first instance to convoy the several contingents of transports from the different parts of the coast where the troops of the invading army were supposed to embark. The *Castelfidardo*, *Affondatore*, *Vesuvio*, and *Monzambano*, were told off to cover and mark the four corners of the area, each side of which was four thousand five hundred mètres in length, which was supposed to be occupied by the transports. The three contingents of torpedo-boats attached to the three divisions of the squadron covered the front of this area, and the other sides were protected by the three divisions themselves. The precise point of debarkation was left to be determined by circumstances as they arose.

These dispositions need not here be considered in detail. It suffices to say, in general terms, that the idea of transporting a large body of troops across a sea in which a hostile fleet is still strategically at large is altogether inadmissible. Either Accini's squadron was capable of trying conclusions with that of the Duke of Genoa, hampered as the latter would be by the duty of protecting so vast and unwieldy a convoy, or it was not. In the latter alternative there was no problem to be solved. The defending squadron was not strategically at large in any real and practical sense, but had been neutralized by the overwhelming force of the convoying fleet—as the Russian fleet was at the time of the landing in the Crimea—and the required command of the sea had been secured by the invading force before the beginning of the operations. In the other alternative the risks to which the convoy was exposed must have been such that it is safe to say that they would never be faced by an invading

force in actual war. Nothing but a certainty that each face of the convoy was defended by a force capable of disposing of any force that the enemy could possibly bring to bear on it, could secure the convoy in the circumstances supposed against the imminent and insurmountable risk of overwhelming disaster. The destruction that a single well-handled warship could cause if it got into the midst of a large and compact convoy, consisting of defenceless transports, loaded with troops, and unaccustomed to steam in company or to act in concert, is simply incalculable. On the other hand, if we are to assume that the force detailed for the defence of each face of the convoy was more than sufficient to cope with any force that the enemy could bring against it, then no doubt the command of the sea was secured, and one disposition was just as good as another; while if we are to assume that the Duke of Genoa when threatened with attack would have time to concentrate the whole of his force on the front likely to be attacked, then the disposition adopted—a disposition to be abandoned as soon as danger threatened—would appear to be not a little lacking in tactical purpose and actuality.

Considerations of this order appear to have governed the dispositions of Accini; but he was not destined to bring his plans to a successful issue. Hostilities were resumed on Sept. 1. The Duke of Genoa's scouting squadron was early at sea, but the convoy with its escort did not leave Maddalena till towards evening. A course was shaped towards Monte Cristo, which was reached at daybreak on Sept. 2. Accini's plan was to gain touch with the expedition by means of his cruisers, and then, forcing himself into the midst of the convoy, to do all the damage he could. But he never had an opportunity of putting his plan in execution. At Monte Cristo the Duke was informed by his scouts that Accini was watching the Italian coast to the northward, and awaiting the approach of the expedition in that quarter. The Duke accordingly determined to avoid Accini's chosen position, and, turning his

back upon him, to attempt a landing at Volturno, between Gaeta and Naples. This was successfully accomplished on the morning of Sept. 3, Volturno being reached without interruption or even observation by the enemy, who failed to put in an appearance during the six hours supposed to be occupied at Volturno in landing the troops. Nevertheless the *Re Umberto*, Accini's flagship, had been observed by Admiral Bertelli and the umpire-in-chief on board the *Trinacria*, off Cape Linaro, a little to the south of Civita Vecchia, on the afternoon of Sept. 2. Cape Linaro is some seventy miles from Monte Cristo, which had been reached by the expedition on the morning of the same day, and the course from Monte Cristo to Volturno must have taken the attacking squadron within some fifteen miles of the same point. The failure of Accini to find and molest his adversary thus remains to a large extent unexplained and even unintelligible. However this may be, the arrival of the expedition at Volturno brought the operations to a final conclusion.

It is far from easy to discern in what single respect the three series of operations above described can be regarded as illustrating the peculiar and distinctive features of a so-called *guerre des côtes* as distinguished from the recognized historical characteristics of a struggle for the command of the sea. In the first phase of the operations the Duke of Genoa was twice interrupted in his demonstrations against the coast by the appearance of an inferior defending fleet, and with sound strategic instinct he recognized at once that his real objective was the enemy's fleet, and promptly abandoned his more or less theatrical demonstrations against the enemy's coasts. His attack on Accini in the Bay of Naples was strategically sound enough, and may be compared not unprofitably with the Japanese attacks on Port Arthur and Wei-hai-wei. It represented his conviction that his aggressive designs must be paralyzed so long as the defending fleet remained strategically at large, but its easy success remains for the most part inexplicable in the circumstances as described.

The second phase of the operations, namely, the attack on Accini at Gaeta, appears to have been legitimately conceived in the same order of ideas, and to be based on the sound assumption that command of the sea will always be regarded as essential to such freedom of maritime aggression as a superior naval force must seek to possess and exercise. The third phase of the operations was practically based on the assumption of an assured command of the sea. If this proposition is disputed, it must be acknowledged that the whole proceeding was strategically an absolute nullity. In order to render the supposed military expedition even colourably feasible, it was found necessary to reduce Accini's force to a mere skeleton, to add to the force at the Duke of Genoa's disposal all the strength that had been subtracted from Accini's, and to select as the basis of operations a position far nearer to the coasts of Italy than any at the disposal of the enemy supposed to be represented—for though Corsica belongs to France, it possesses no inherent military resources capable of sustaining an important maritime expedition, and if selected as the basis of such an expedition, must itself be supplied with the troops required by transport across a sea of which the command is *ex hypothesi* in dispute. Even so, however, with all these advantages in his favour—advantages which no real enemy would be likely to enjoy, at any rate at the outset of hostilities—it was recognized by the Duke of Genoa, as is shown by the whole character of his dispositions, that his undertaking was surrounded by immense difficulties, and at least menaced with overwhelming disaster. He succeeded in traversing the sea without impediment and landing his troops unmolested. But to land an army in an enemy's country is only the first, and not necessarily the most difficult, part of the problem of invasion. Unless its maritime communications are secure, an army so landed is certain sooner or later to perish. If Accini was strong enough to attempt to intercept the expedition, he was also strong enough to interfere with its communications

after it had landed. Thus it was not enough to elude his force; he must sooner or later be brought to an action and defeated. In actual warfare this would certainly have to be done before such an expedition was undertaken. In manœuvres the order may often be inverted with apparent impunity, because the proceedings can always be suspended at a point where the further solution of the problem becomes embarrassing. But the stern reality of war allows no such liberties to be taken; and those who propose to violate the historic principles of strategy, as established by the experience of ages upon ages of warfare, must at least be prepared to show where those principles are at fault, and how they can be bettered in the future. There is no single incident in the operations above described which can properly be held to show that a so-called war of coasts, as distinguished from a struggle for the command of the sea in dispute, is indicated as the naval strategy of the future by the methods, instruments, and appliances of modern naval warfare. If the two things are identical, well and good. It is merely a question of terms, and on the whole there appears to be no good reason why the new term should be substituted for the old. But if the two things are different, then it still remains to be shown in what respect the new is in any sense better than the old.

J. R. T.

THE GERMAN STRATEGIST AT SEA.*

"MY situation with this army," wrote Nelson on board H.M.S. *Agamemnon* in October, 1795, "has convinced me of the futility of Continental alliances. The conduct of the Court of Vienna, whatever may be said by the House of Commons to the contrary, is nothing but deception. I am certain, if it appears to that Court to be their interest to make peace with France, it will instantly be done. What is Austria better than Prussia? In one respect, Prussia perhaps is better than Austria: the moment he got our money he finished the farce. Austria, I fear, may induce us to give her more."

The history of the numerous Continental alliances, their objects, duration, and success during the past two centuries, goes far to prove the truth of Nelson's words. The combinations have been many and peculiar, the defections significant, the achievements chequered. Race sympathies and antipathies, dynastic ambitions and affinities, real and spurious national interests, diplomatic intrigues, mere gold—all have played their part in bringing about temporary alliances between the States of Europe. The ever-changing arrangements of colour shown in the kaleidoscope, turned by the hand of time, are not due to mere chance. Certain principles or laws can be traced which must serve as guides of policy to-day.

Effective alliances mean war—not the maintenance of abstract propositions. War is the only test of their

* *United Service Magazine.*

solidarity and the only proof that their professed objects are real. The "Triple Alliance" of 1717—Great Britain, France, and Holland—formed to uphold the treaty of Utrecht, became the "Quadruple Alliance" in 1718 by the adhesion of Austria, whose embroilment with Spain precipitated the war which broke out in the same year. The elder Byng was at once despatched to the Mediterranean to shatter the Spanish fleet at Cape Passaro, and the British Navy, rendering timely aid to Austria and supporting the tardy action of France, played a decisive part in securing the peace of 1721. The "Armed Neutrality" of 1780, formed by Russia, Prussia, Sweden, Denmark, and Holland, to enforce the rights of neutrals, provided nothing but a paper support to the last-named Power in its disastrous conflict with Great Britain. The "Maritime Confederacy" of 1801, after entailing upon Denmark the Battle of the Baltic, died with the Emperor Paul. The principal result of the Northern Coalition arising out of the treaty of Tilsit was the bombardment of Copenhagen and the seizure of the Danish fleet.

Again, the effective maintenance of alliances demands not merely that identity of interests between the contracting Powers shall endure, but that expediency shall dictate a common course to all. This condition can rarely or never be fulfilled during a period of war, as the history of the various coalitions formed against France between 1793 and 1815 clearly proves. Nothing could have been more ineffectual than the first of these combinations. Austria and Prussia were mutually jealous. Russia was occupied in crushing Poland. Prussia and Spain retired in 1795, and in the following year the latter Power was at war with England. Holland, forced out of her alliance, became an object of attack. The second coalition brought Russian troops to Italy and to co-operate in the abortive Helder expedition, while Turks shared in England's Egyptian operations. But Austria, after the Hohenlinden campaign of 1800, bound herself to conclude a separate treaty apart from the Allies, and Russia in 1801 headed the Maritime

Confederacy directed mainly against England. The third coalition was broken by the enforced defection of Austria after Austerlitz, and Prussia, who had stood aloof when her action might have been effective, entered the lists only to lose Jena and suffer temporary effacement. Turkey, the ally of the second coalition, being involved in war with Russia, who deserted it, but temporarily upheld the third, Admiral Duckworth was sent on a futile expedition to the Sea of Marmara, and was joined by the Russian squadron only after his undignified retreat. Yet the same year witnessed the Treaty of Tilsit following Friedland, and the complete withdrawal of Russia from the obligations of the alliance, to be soon followed by active hostility. The fourth coalition of 1810 was broken up by the defection, after Wagram, of Austria, in whose behalf the ill-fated Walcheren expedition had been undertaken.

Finally, the slightest study of the history of alliances serves to show the dominating position held by Great Britain. From the days of the League of Augsburg imported into this country by William of Orange, down to the operations against Mehemet Ali in 1840, the combinations of the Powers, so far as they have shown effective results, owe these results to the direction, the material assistance, and the sustained impulse proceeding from England. Danger to the liberties of Europe, whether threatened by Louis XIV., by Spain, or by Napoleon, was met and averted by the genius and the sea power of England. Of the wars of the French Revolution, Captain Mahan justly states that the Powers of Europe "thought to cope with a mighty spirit by means of elaborate and powerful machinery. . . . The means were insufficient. . . . Fortunately for Europe and for freedom, another spirit, less demonstrative but equally powerful, was already living and animating another great nation peculiarly fitted by position and by the character of its people to grapple with and exhaust all that was vicious and destructive in the French Revolution." Throughout the period of almost continuous war which began in 1689 and ended in 1815,

there was no effective alliance in which Great Britain did not play a dominating *rôle*, none to which she did not bring more than she received. Nor did any other Power show the same tenacity of purpose. Allies fell away as soon as ever their temporary interests appeared to demand peace or a change of sides. England remained staunch to the cause for which she had taken up arms. In this admirable persistency, however, there was no noble striving after an abstract ideal. The maintenance of the balance of power was a convenient pretext of action. The phrase served the usual purpose of phrases; but England had entered upon an era of colonial expansion, and herein lay the real motive of her action. Whether Marlborough led his composite armies to victory in Flanders, or Wellington sternly forced his steadfast way from Torres Vedras to Paris, whatever were the means adopted, the real object was the suppression of maritime rivals. For this reason France, Spain, and Holland figure as the principal enemies of England, and Prussia, Austria, and Russia as the occasional allies. For this reason also, when the War of American Independence—a purely British quarrel—broke out in 1775, this country was not merely without allies, but became successively involved with France, Spain, and Holland, and menaced by the armed neutrality of Prussia, Russia, Sweden, and Denmark.

In defiance of the plain teaching of history, and of all the conditions of our present national life, some industrious military writers persistently urge that our salvation is to be found only in the arms of the modern Triple Alliance. With an utter absence of humour they gravely set themselves to demonstrate the enormous advantages which the Navy of England could bring to the assistance of the Central Powers. The spectacle of Penelope engaged in cataloguing her charms for the instruction of her suitors is not edifying. As to the corresponding advantages which are to accrue to this country, these writers are naturally vague. No one in his senses will be induced to believe that, if Great Britain were unfortunately involved

in war with France, arising from some colonial dispute, or with Russia on the frontier of Afghanistan, the Central Powers would move a corporal's guard to her assistance. What possible inducement could exist to intervene in a struggle eminently to their advantage, and involving issues wholly outside their interests?

Meanwhile, the eager suitors on their side are not inactive. Their English sympathizers facilitate their literary operations in this country, and they naturally have free access to the Press of Berlin, Vienna, and Rome. Their plan of campaign is transparently simple. Assuming the *rôle* of disinterested advisers, it is their object to convey frequent warnings of dangers which, so it is intimated, can be averted only by active co-operation with the Triple Alliance. Thus it is sought to work directly upon the fears of England and of Italy, and indirectly upon the former Power through the susceptibilities of the latter.

Germany has produced military literature of the highest class, though limited in quantity. When, however, the German strategist rashly abandons his roads and railways in order to put to sea, his literary efforts become pitiable. He has no naval history or naval traditions of his own. He has neither time nor opportunity for studying those of other Powers. He can produce an academical treatise of any assigned length on the defence of woods, or the probable effects of the introduction of smokeless powder upon tactics and *moral*. It is surely his misfortune that the prize for which he elects to compete should be the right to manipulate to his advantage the greatest Navy of the world.

In studying the literary results of this remarkable competition, it seems possible to trace the general idea to its root in the dim annals of the Middle Ages. Baron von Schinkenbaum lived secure in his castle perched on some eminence which "commanded" the surrounding country. All was well until the neighbouring Graf von Blitzenstein conceived the idea of adding a culverin to his armament. The Baron's technical advisers at once pointed out that his

strategic position was gravely "compromised," and that at the least it would be necessary to strengthen his barbican and provide a new bombard. The Graf replied with a machicoulis gallery of improved design. Thus we may easily imagine the simple-minded ancestors of the German strategist to have shaped their military policy; thus their successor seeks to instruct the greatest naval Power of the age. Fortify a harbour, a promontory, or an island, and you at once "command" a great tract of sea, an extended coast-line, an indefinite *Hinterland;* you are, in fact, secure, unless another Power should begin to fortify some point within or near this tract of sea, in which case your position is at once compromised, and only the Triple Alliance can save you. Such precepts, set forth with portentous solemnity, are enjoined upon the countrymen of Nelson. Everywhere throughout the world we appear to be in danger either from want of fortifications or on account of the possible fortifications of other Powers. Thus the Canadian Pacific Railway is recognized as a great imperial resource; but "fortified bases" are needed for "the defence of the iron road," more than three thousand seven hundred miles in length. We ought to fortify Newfoundland, and especially Anticosti, which, "like Heligoland at the mouth of the Elbe, rejoices in a most advantageous position." At the other side of the continent lies Vancouver town, also unfortified, and stated to be "under the disadvantage of dense fogs and dangerous of entry by means of the Haro Strait, with its island-sown narrows, which limit the ebb and flow of traffic." Yet, in another sentence, we learn that this unfavoured spot is "marvellously adapted to the strategy of a maritime Power!"

Though at present secure in the Far East, we are living in a fool's paradise, for, "as soon as France shall have effectually pacified Tonquin and found a strategic base for operating by land against Indo-China and by sea from the natural harbours of Halong and Saigon, the slender thread of English communications may be considered as virtually severed." The German strategist's conception of

the ocean communications of a great naval Power is well illustrated by this sentence. Elsewhere he throws further light upon the point by the statement that the sea route to Suez passes "at less than a spear-throw from the island" of Crete! Obviously, his mind is confusing maritime communications with the tree-begirt roads of the Fatherland.

Doubtless there are many people in this country who believe that the guns of Gibraltar bar the entrance to the Mediterranean, but the views of such persons do not find expression in military journals. The German strategist, however, has discovered that "until now England barred the passage of Bab-el-Mandeb" by the mere possession of the small island of Perim. This advantage may at any time disappear, since "a glance at the map shows us that some fortifications on the Franco-African promontories of Dumeirah and Siyan, and on the Suba Islands, would transform England's position here into one of insignificance." Such extensive measures are perhaps unnecessary for our undoing, because, as is pointed out, "it is easy to calculate in what wise Obok of the French might well serve to flank the Straits of Bab-el-Mandeb strategically, and eventually to command them." In other words, to secure naval command in certain waters is merely a question of fortification!

Egypt naturally provides many snares for the unsuspecting strategist, and leads him in addition to a reckless misuse of technical terms. "The geographical features" of this remarkable country, where "the blue waves of the Mediterranean . . . press up the delta of the Nile," and "the Pyramids support the horizon . . . not only constitute a strong natural defence for herself, but afford a firm basis for pushing forward offensive operations in every direction of the compass." Yet a few sentences later Egypt is described as an "oasis" in the middle of deserts. There is no country in the world more certain to fall an easy prey to sea power; none less suited to afford a "firm basis" for "offensive operations," except in the hands of a State holding undisputed command of the Mediterranean and the Red Sea; none possessing fewer military resources.

The strategist maladroitly reminds us of the "victory of Bonaparte and Kléber at the foot of the Pyramids at the close of the last century." "Do not," he asks, "the words addressed to the Directory by the youthful French general, 'En prenant et en gardant l'Égypte je prends en main les destinées du monde,' constitute a strong testimony to the strategic importance of Egypt?" "En gardant," "je prends en main"—the bitter irony of these words, read in the light of history, does not occur to the strategist. He has doubtless never heard of the "intercepted correspondence" of the French, which tells the cruel fate of an army imprisoned by the seas and deserts in this country, so admirably adapted for "pushing forward offensive operations in every direction of the compass." "The defeat of our fleet," wrote Citizen Le Père on August 5, 1798, "in the dreadful action of the 1st inst. is a calamity which leaves us here as children totally lost to the mother country. Nothing but peace can restore us to her." "I used to say in Europe," wrote Kléber, "that this country was for France the *point d'appui*, by means of which she might move at will the commercial system of every quarter of the globe; but to do this effectually a powerful lever is required, and that lever is a navy. Ours has existed. *Since that period everything has changed.*" Napoleon, whose ignorance of everything relating to the sea was always conspicuous, may perhaps have been imbued with the ideas which the German strategist propounds to-day. He may have thought—before August 1, 1798—that Egypt in itself would be a source of strength to any Power which could reach it, that its "commerce" could "sustain its warlike strength;" in short, that its strategic importance was not purely and solely a question of sea power.

How far neglect of the dominating factor may carry the strategist is shown by the following remarkable statements. "To the trained military eye Egypt presents itself as the eastern bastion of the ill-shaped African continent, a bastion naturally strong and capable of resisting attack. . . . The bastion at once commands the narrow strip of

coast extending to Tripoli and the curtain extending along the Libyan desert to the Soudan." "The trained military eye" is evidently a comprehensive organ, as is further proved by the assertion that England "dominates the important angle where Syria joins Asia Minor—the Gulf of Iskenderun—by means of the gift brought home by Beaconsfield from the Berlin Congress, the island of Cyprus." If England "dominates" any portion of the Levant, it is "by means of" the Imperial Navy, not by the lease of the island of Cyprus, which is practically useless for naval purposes and does not even fulfil the strategist's condition of possessing fortifications. Yet "Cyprus in the same manner controls the Anatolian and Syrian coasts. The strategic axis in this maritime region oscillates between Cyprus, Alexandria and Cyprus, Port Said." "What is the chronometer of God?" asked a quiet voice at the conclusion of the sea-captain's impressive story in the *Idle Excursion*. What, we may well ask, is an oscillating "strategic axis"?

The "English padlock" by which the southern entrance of the Red Sea is, was, or might be "secured;" Aden, the "fortress of rock . . . on which the English leopard cowers;" the "detached fort, Socotra;" Egypt, that commanding "bastion;" Cyprus, which "partially, at least, paralyzes the strategic line of operations from Rhodes to Crete"—all are practically of no avail. "As soon as France has deepened the canal from Bordeaux to Narbonne, so that men-of-war can use it, from the day of its opening the nautical centre of gravity of Western Europe will be displaced, and the control of the Suez route will lie unquestionably in French hands." Should the strategist eventually discover that this canal passes over a height of six hundred feet and must contain more than a hundred locks, that the works required to enable it to transport large ships of war would be stupendous, that the provision of an adequate water-supply at the summit level would offer enormous difficulties, and that the time required for the transit of a fleet would be inordinate, his general conclusion

would remain unaltered. The "military eye" discerns other weapons by which British power in the Mediterranean must be destroyed, Already "the security of the West, from the British Islands to Alexandria and Port Said, has suffered seriously since France has hoped more and more to realize the dream of the Mediterranean as a French lake. For in Biserta . . . there stands nearly completed a strong maritime fortification endangering the route of the English army and occupying an incomparable position opposite the neighbouring island of Malta."

In the view of the strategist, Biserta is capable of revolutionizing all existing naval conditions in the Mediterranean, and England, menaced in a special sense, must be awakened to a sense of her peril. Vienna, however, has for some time been cognizant of the "vigilance and uneasiness of both the Italians and the English," and is now convinced that the former regard the present state of things as most serious, and believe that its gravity will be "recognized in England;" for Biserta, though "destined to become the point of concentration of all the French forces in the great unavoidable and decisive struggle," will nevertheless oblige England to "divide its fleet" and "keep two squadrons in readiness, one at Gibraltar and one at Malta." Curiously enough, although the at present non-existent fortifications of Biserta will modify "the balance of power in the Mediterranean . . . to the prejudice of the Triple Alliance," the "Tunisian Question seems destined to strengthen and maintain" that alliance. The Vienna strategist thus appears to be grateful to the menace of Biserta as calculated to check any tendency towards backsliding on the part of Italy. Berlin, on the other hand, supplies specific advice to "proud Albion" to counteract the malefic influence of Biserta by the creation of a fortified naval station in the Zafrin Islands, and at the same time directs Italy to fortify the southern coast of Sicily.

Such are the opinions which appear and reappear in the section of the European Press which is at the disposal of the Triple Alliance. Their unanimity, even to the

turn of a phrase, is remarkable. The fundamental misconception of the German strategist runs through all alike. Command of the sea is presented as a mere matter of fortified posts on shore. The very essence of maritime superiority, as demonstrated by the history of two thousand years, is forgotten. To convert Biserta into a great naval port will involve an enormous outlay, and will add little to the offensive power of France. The command of the Mediterranean can be won and held only by successful fleet actions; in other words, by the Power which maintains the largest and most efficient fleet in these waters. In so far as Biserta can render assistance in the maintaining of a sea-going fleet, it will be a factor to be taken into account. In any case, it can detract nothing from the naval strength which Great Britain could exert, while it will obviously add to the responsibilities of the French fleet. The balance of power at sea is a question of navies, not of fortifications, and the conditions which confer naval supremacy cannot be secured by mere money.

When, quitting his "bastions," "curtains," and "detached forts," the strategist turns to high policy and dictates the *rôle* of England in a great European war, we have much reason to be grateful for his candour. The Navy of England is in the first place to guarantee "the German coasts." Then the co-operation of the English fleet with the German Army "will prejudice the extension of Russia's power on her south-west frontier," and "probably . . . prevent a greater despatch of troops from the military districts of Moscow and Kazan to the Asiatic theatre of war." In the Mediterranean, on the other hand, the English fleet, "by the side of" those of Italy and Austria, is to "neutralize or destroy the French Mediterranean fleet." This accomplished, England will at once be "enabled freely to dispose of a great part of her fleet for the defence of her coasts, her trade, her imports, and other objects of the war." The strategist does not pause to explain by whom the coasts of England would in this case be threatened; but the defence of

these coasts is held out as the principal return which the Central Powers are to make for the gift of Her Majesty's Navy. Their security is to be doubly guaranteed, since, not merely will the British fleet "neutralize or destroy" that of the French, but "an advance of the German and Italian armies on the eastern frontier of France would make impossible any great undertaking of the latter Power against England and her coasts." On one point the strategist is naturally clear: "unquestionably the greater advantage" lies "on the side of England."

The assumptions involved in this simple programme are evident. Either Russia is to make an aggressive movement upon India at a moment when she is embroiled with the Central Powers, or those Powers are to regard such a movement, solely affecting England, as a *casus belli;* or England, as a member of the Triple Alliance, is to carry war into Central Asia because of some Russo-Austrian or Franco-German dispute. Failing the fulfilment of one or other of these conditions, the prospective advantages held out to England in the Far East disappear, and we are thrown back on the promised protection of our coast line. Who shall say that any one of them will be fulfilled? Can we not, as in the past, guard our shores without foreign assistance?

While every species of doubt hangs over the advantages which are held out to us, there is none as to the price to be paid. For a time at least, the splendid fleet of England, with all its complex responsibilities, is to be placed at the disposal of the Central Powers, for objects which may possibly conflict with the national needs and interests. And any purely European quarrel, accidental or designed, is, by reason of the predetermined participation of this country, to be felt in every quarter of the world. No great war in which Great Britain shares can be confined to Europe.

We shall not accept these terms. The time may come when our entry into a European struggle will be demanded by every consideration of honour and of policy. We

reserve to ourselves the right to determine when that time shall have arrived, and to decide the direction and the scope of our action. Till then, the Triple Alliance, in so far as its aims are peaceful, can count on our sympathy. Its *raison d'être*—the perpetuation of the frontier forced upon France in 1871—is not a British interest. Its present achievements—the rapid impoverishment of Italy and the unnatural *rapprochement* of France and Russia—are not special objects of our desire. Whether the moderation of its ambitions would remain unchanged if the enormous weight of the British Navy were thrown into the scale we do not know. We do know from all history that, unless an alliance is a mere name, no individual member can avert a war which may chance to suit the policy of others. Meanwhile, the German strategist, as the expert advocate of the Triple Alliance, must be taken seriously. His utterances show him to be in earnest; their frequency proves his industry. That his knowledge is pitiably inadequate is his misfortune, not his fault. The sea is not his element. Nor can we expect him to understand the conditions of an Empire embodying great self-governing colonies.

Four hundred years ago, before Europe had heard of the Electorate of Brandenburg or the Duchy of Prussia, a great Englishman wrote as follows:—

"But this much is certain; that he that commands the sea is at great liberty, and may take as much and as little of the war as he will; whereas those that be strongest by land are many times in great straits. Surely at this day, with us of Europe the vantage of strength at sea (which is one of the principal dowries of this kingdom of Great Britain) is great."

In these pregnant words, Bacon lays down the first principles of a great national policy. "He that commands the sea" may not pledge himself in advance to the widely differing aims of "those that be strongest by land."

G. S. C.

ENGLAND AND THE MEDITERRANEAN.*

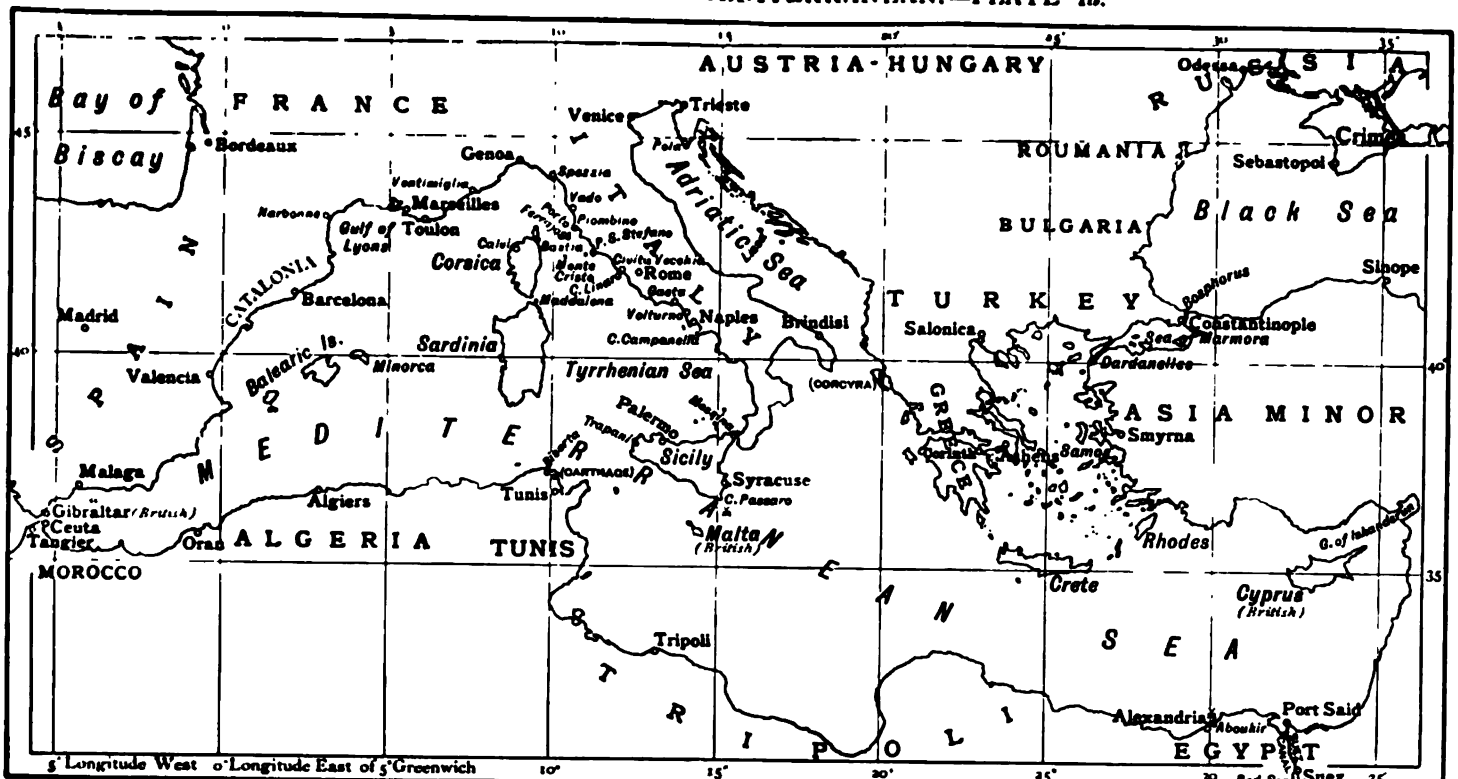
[The abandonment of the Mediterranean has found advocates in several quarters; but this extraordinary proposal has never been publicly set forth with such completeness of detail as in the article here subjected to criticism. This criticism is republished not for the purpose of controversy, but because the dangerous fallacy here discussed is diametrically opposed to the principles which the present volume is intended to uphold.]

WHEN a writer, speculating in days of peace, bids us abandon a policy which has undergone the test of great wars, abundantly justifying the views of the statesmen and the sailors who have upheld it, he incurs a grave responsibility. The more plausible his statements, the greater should be the suspicion with which they are regarded, since, at the best, he can but offer us personal surmise in place of history.

Mr. Laird Clowes has brought forward a laudably definite proposal. There are here no half-measures; everything is detailed. The Mediterranean is to be abandoned alike in peace and in war. The historic waters of the most important sea of the world are no longer to carry the white ensign, except as an occasional guest "on a similar footing" to "Brazil." From Gibraltar to the Straits of Bab-el-Mandeb, for three thousand miles of the greatest trade-route of the world, the sea power of the British Empire is to be inoperative. Egypt is to become a French colony; Tripoli is to share the fate of Tunis; Malta is handed over to the Pope; Cyprus reverts to the Porte. In return, we are to be permitted to seize Tangier, and occupy Morocco, west of

* *Nineteenth Century*, April, 1895.

SKETCH MAP OF THE MEDITERRANEAN.—PLATE Ia.



Walker & Boutall sc.

To face p. 228.

the fifth meridian of West longitude, with a hinterland undefined, and also apparently to annex "the peninsula of Bab-el-Mandeb" and the rugged and worthless promontory of Siyan on the Somali coast.

Such is the scheme which Mr. Laird Clowes has propounded. No doubts or misgivings seem to occur to him; certitude is stamped upon every sentence. Of argument based on past experience or on reason there is none. His few incidental excursions into history are singularly unfortunate. Assertion follows assertion throughout the article with aggravating persistency. He has wholly failed to see that, in demanding that we should break with all the teaching of the past, and deliberately fling to the winds the rich experience of great wars, something more than the *ipse dixit* of "Nauticus" is required. We claim at least to be reasoned with before taking a leap into Cimmerian darkness. "The day for plain speaking has come," he tells us. I agree with him.

After careful study of this remarkable article, I fail to discover precisely what is the ruling motive. We are led at the outset to believe that pure economy is the object sought. "It is almost hopeless to expect any government" to give us the "*matériel* and *personnel*" necessary—in Mr. Laird Clowes's view—to hold the Mediterranean. Therefore, apparently, we are to accept the revolution he advocates. Later on, however, we are informed that "mere motives of economy would scarcely . . . justify" us in taking the step, and the tone frequently adopted seems to indicate that, under any circumstances, our best and safest policy would be to adopt this brand new gospel. Our presence in the Mediterranean even appears to arouse Mr. Laird Clowes's resentment. In that sea we possess nothing except what is "valueless and unproductive." "We went in only to protect our commerce against piracy; we went next . . . in self-defence against France and Spain;" we remained for several alleged reasons, but "the truth is" that our stay is due to "a habit of meddling with other people's business."

History was never more absolutely travestied. The first British fighting fleet entered the Mediterranean in 1194, carrying Richard the First to Palestine, and capturing *en route* Messina and Cyprus. We "went next" in force in 1654, by the orders of Cromwell, "to procure satisfaction from such Princes and States as had either insulted the Government, or injured the commerce of England."* The orders, which Blake carried out to the letter, were by no means confined to the suppression of piracy. Before the end of April, 1655, the great Admiral of the Commonwealth "had taught nations to whom the very name of Englishmen was a strange sound to respect its honour and its rights. . . . The petty Princes of Italy had been made to feel the power of the Northern Protestants . . . and the distant echo of our guns had startled the Council Chambers of Venice and Constantinople."† We "went next" in force in 1694 to protect our commerce and save Spain, our ally, from the loss of Barcelona and Catalonia. We went again in 1695, risking an inferior force in a successful effort to protect our trade. On the 13th of August, 1704, Sir George Rooke, with a British and Dutch force, won the important victory of Malaga over a superior French fleet, and established a command of the Mediterranean unchallenged for the remaining period of the war. After Byng's failure and retirement to Gibraltar in 1756, Hawke was sent in with orders "to endeavour by all means to destroy the French fleet."‡ Throughout the long struggle with the French Republic and Empire, the vital necessity of holding on to the Mediterranean was made manifest, notwithstanding that our trade interests were then relatively trivial. Inferiority of force did not deter our admirals from entering it, and, when temporarily abandoned, it was quickly reoccupied. At the beginning of 1798, the French controlled the Mediterranean from end to end. At its close,

* Orders of Cromwell to Blake.
† "Life of Blake," by Hepworth Dixon.
‡ Admiralty orders to Lord Hawke.

two French ships of the line—both subsequently lost—remained afloat. If Mr. Laird Clowes's "law of self-preservation" had found favour in the days of real national stress, Nelson, with a force inferior to the Toulon fleet, would not have entered the Mediterranean in May, 1798, and the battle of the Nile would never have been fought.* We then held on to the Mediterranean simply and solely because we were fighting for our existence as a nation—not engaged in discussing theories—and stern experience had proved the policy to be indefeasible. From the battle of the Nile to the present day we have maintained our position in the great inland sea. No Power of modern Europe has so old an historic claim to use its waters; not one has a greater record of fighting there performed. Yet Mr. Laird Clowes ventures to describe our position as one of "provocative swagger" on one page, and of disinterested "philanthropy" on another. We are in the Mediterranean to-day (1) because history shows us that we must be there in war; (2) because our commerce there afloat is enormously greater than that of any other Power; (3) because no other waters would serve equally well for the training of our fleet. The first reason does not appeal to Mr. Laird Clowes, who is able to assert that "it is absurd to suggest that our interests in the Mediterranean are paramount to those of France, of Italy, and of Spain." Our trade he abandons altogether, after characterizing it as "valueless and unproductive." The Mediterranean as providing excellent training waters for Great Britain—or her possible enemies—has not presented itself to his imagination.

I cannot, within due limits, hope to deal with the whole of the varied and intricate subjects over which Mr. Laird Clowes lightly ranges. The entire Eastern question, the merits and demerits of the Triple Alliance, the fighting capacity of the Italian navy, and the possible combinations of Mediterranean Powers must be left alone. In laying

* If Nelson had possessed a few more frigates, Napoleon would almost certainly have been caught, and the history of Europe changed.

down the lines of a national policy, we cannot go beyond reasonable probabilities, and the fact that "half a dozen other Powers, including the two most formidable, have well-fortified stations full of ships" in the Mediterranean is scarcely a conclusive reason for our retreat. All these six Powers will certainly not be arrayed against us; if one of them obtains an ally, it is reasonable, considering the great conflict of interests in these waters, to suppose that we may do likewise. Mr. Laird Clowes has, however, erected an entirely new standard. In his view we have no right to be in the Mediterranean unless we are "absolutely unassailable." No more preposterous theory can be imagined. No nation can ever be "absolutely unassailable" at the outbreak of war, either in the naval or military sense, and the navy or the army which abandons a position as a matter of course because it is liable to attack has ceased to be a fighting force and has sunk beneath contempt. If, as is urged, we abandon the Mediterranean because we may perhaps have to fight there, our star of empire has already set.

Other considerations have, however, combined to prompt these curiously eager counsels of retreat. Our interests in these waters are described as inferior to those of Spain; while our purely Mediterranean commerce is not "essential, happily, to our well-being." The annual total of British trade passing the Straits of Gibraltar is about £214,000,000, and of this purely Mediterranean commerce is £97,220,000—far greater, therefore, than our whole Australasian trade. Further, there is a large and growing trade of British colonies with Mediterranean ports.* All this Mr. Laird Clowes proposes to abandon because of some French torpedo-boat stations on the shores of Northern Africa and the Gulf of Lyons. To deal fully with the torpedo-boat question would require an article, and I can only say here that his view is based on pure assumption. I

* The total British colonial trade with foreign countries passing the Straits of Bab-el-Mandeb is £45,136,000. I believe the figures above given to be below the reality. In any case they do not include the great value of the shipping.

do not for a moment contend that, at the outset of war, this great trade route can be guaranteed. I assert, however, that, by right of the past, the command of the Mediterranean belongs to Great Britain, in the sense that it must be fought for by any other Power. Should the British Navy win a victory in these waters, or should the French fleet decline to accept battle, it will not be difficult to effectually abate the torpedo-boat menace.

"We should," Mr. Laird Clowes tells us, "accustom ourselves to do without the Canal to some extent, even in peace-time." He does not pause to explain what he means. Our Indian reliefs can of course be sent round the Cape, if there were any possible object in so doing; but inexorable laws, which no theories can change, govern trade routes, and the Suez Canal has dictated the structure of a considerable portion of our steam tonnage. Trade will continue to follow its accustomed lines, and to abandon all attempt to defend it would shake the very foundations of the Empire and imperil the allegiance of great colonies.

Another remarkable statement must be noticed, because it lies at the root of Mr. Laird Clowes's new "law of self-preservation." "Even if we held both banks of the Suez Canal,* with the entire military force of the Empire, I doubt whether we could prevent a skilful and cunning enemy, no matter how weak he may be, from blocking the passage almost whenever and wherever he might see fit." To prevent foul play, it is merely necessary to pass all mercantile ships through the waterway with a guard on board. Any Power in military possession of Egypt could apply this simple precaution, which requires the very minimum of military force. The point is vital, since our sole real reason for being in Egypt to-day is, by preserving internal order, to avert occupation by a foreign Power, which would be able at once to utilize the Canal for its own war vessels and close it to those of an enemy.

* Serenely oblivious of our large proprietorship in this water-way, Mr. Laird Clowes classes it among 'other people's ditches.'

A neutral Egypt properly administered would meet all our legitimate requirements, but a French occupation we cannot possibly permit. How this consideration affects Mr. Laird Clowes's readjustment of the balance of power will shortly be seen.

Reduced to its simplest terms, the problem with which Mr. Laird Clowes deals is as old as naval warfare. It has been successfully solved in the past by our greatest admirals. Nothing has occurred to demand a new and supremely fantastic solution. To control an enemy's fleet, either by defeating it or by confining it in port, is the primary object of naval war. The great sailors of Elizabeth were unanimous as to the method of accomplishing the task. "With fifty sail of shipping," wrote Drake to the Council more than three hundred years ago, "we shall do more good upon their coast than a great many more will do here at home; and the sooner we are gone, the better we shall be able to impeach them." "The opinion of Sir Francis Drake, Mr. Hawkyns, Mr. Frobiser and others, that be men of greatest judgment and experience," wrote Howard to Walsyngham, "is that the surest way to meet with the Spanish Fleet is upon their own coast, or in any harbour of their own. . . . The seas are broad; but if we had been on their coast they durst not have put off." This has been the guiding principle to the greatest glories of the British navy. Captain Mahan has enforced the lesson throughout his brilliant writings, and has shown, beyond all question, what the naval occupation of the Mediterranean implies. The control of the Toulon fleet, which Mr. Laird Clowes now gives up as hopeless, if not unnecessary, is a mere detail in the application of a universal law. St. Vincent and Nelson not only saw that the thing must be done, but succeeded in doing it, and the fact that the abandonment of the inland sea in 1796 was countermanded during its execution, and the occupation restored as soon as possible in spite of our numerical inferiority, is conclusive of a necessity enforced by the demands of war. If Mann had "obeyed his orders,"

states Mahan, "the battle of Cape St. Vincent would have been fought in the Mediterranean instead of the Atlantic," and the results of the victory would have been greatly enhanced. "The expulsion of the English," wrote Napoleon, "has a great effect upon the success of our military operations in Italy." Well might Nelson "lament our present orders in sackcloth and ashes, so dishonourable to the dignity of England." *

Since the days of Nelson two changes have come to pass. (1) France has occupied Algeria, and, by means of the nominal "Regency" but real annexation of Tunis, has become possessed of a thousand miles of the coast-line of Northern Africa. (2) Toulon has, within the last few years only, become the base of the main French fleet. The first of these conditions supplies a powerful argument against the new scheme; since, as Captain Mahan has pointed out, the first object of Great Britain should be "to grasp firmly some vital chord † of the enemy's communications, and so force him to fight there." This potent lever, which St. Vincent and Nelson had not, Mr. Laird Clowes bids us fling aside. The second condition seems to be the real "basis or substratum, what you will," of the entire theory. Were the policy inaugurated by the late Admiral Aube to be changed, and the naval strength of France to be mainly transferred to the Atlantic, the so-called "millstone," together with all the erratic boulders which have accumulated round it, would at once crumble into dust.

The policy of Mr. Laird Clowes is based upon the negation of an axiom of war. Now, as always, the only true objective of a navy is an enemy's fleets. Where those fleets are, the British Navy must be, and the pursuit of subsidiary objects inevitably entails failure or disaster. Throughout the discursive article under review, I fail to trace the smallest recognition of this elementary truth. If

* Letter to Mrs. Nelson, October, 1796.

† I do not assert that this chord is 'vital,' but it is more nearly so than any other accessible to a navy.

the plan of substituting a "seal" at the Straits of Gibraltar and Bab-el-Mandeb for the policy which has given to the British Navy all its past glories means anything at all, it is pure defence in regard to the most important portion of the theatre of war. Defence—for the British Empire—spells ruin.

At the great gates of the Mediterranean and Red Sea we are bidden to maintain an expectant attitude, awaiting an attack close to our fortified ports of Gibraltar and Tangier on the one side, and Aden, Perim, Bab-el-Mandeb, and Siyan on the other. Mr. Laird Clowes speaks much of batteries on shore, destroyers and guardships; he says singularly little about fighting fleets. The modern theory seems to be that these broad sea-channels may be regarded as the "defiles" dear to the writer of military text-books—a species of Thermopylæ where a small force can effectually oppose a superior fleet. The analogy is false. To "seal" the Straits of Gibraltar requires the constant presence of a fleet capable of defeating any force that can attempt to issue therefrom. Such a fleet must always be ready for action, cruising close at hand in the Atlantic or lying behind its anti-torpedo breakwaters; for the choice of the moment of attack is left with the enemy. No position could be more harassing, more insecure, or more totally opposed to every tradition of successful war. It will occur to most people that the fleet which can accomplish all that is thus demanded might as well be cruising in the Mediterranean with its scouts observing the enemy's ports, free to manœuvre, gaining efficiency every day, gleaning accurate information, and able, when the enemy appears, to choose its own moment of battle.

Mr. Laird Clowes's proposal, however, goes a great deal further. He applies the same conditions to the Straits of Bab-el-Mandeb, and he hands over Egypt and the Suez Canal to the French. In other words, he enables our rivals, operating on interior lines, to oppose us at the southern end of the Red Sea, with every ship that can

pass through the deepened Canal. To control the Toulon fleet by the method proposed implies the provision of a naval force double that entailed by the old and proved war policy. The whole case is not even now presented, for he gratuitously provides the French with the finest training waters of the world. Here their whole fleet, with all its mobilized craft, can, on the outbreak of war, be quietly brought up to the highest state of efficiency. What this means, students of Captain Mahan's works are able to judge.

In spite of one apparently contradictory statement, I consider that I am justified in believing that Mr. Laird Clowes claims economy in some form for his scheme.* Here, culled from his scattered sentences, are the measures which he calls upon us to undertake at once:—

(1) Improvement of Gibraltar.

(2) Provision of breakwaters, docks, fortifications, and garrison at Tangier.

(3) Occupation of Morocco, west of 5° West longitude, and consequent defence against France of a land frontier of hundreds of miles.

(4) Fortifications, and therefore great increase of garrison, at Perim.

(5) Fortification and garrison of promontory of Bab-el-Mandeb.

(6) Fortification and garrison of the barren rock of Siyan.

(7) Large development of Bombay as a naval base.

For Malta, therefore, Mr. Laird Clowes substitutes four new fortresses, which *ex hypothesi* must be powerfully and permanently garrisoned. I know every corner of Malta, which, in addition to its coast defences, has one of the strongest land-fronts of all the fortresses of the world. Until after a great naval disaster, Malta fulfils Mr. Laird Clowes's condition of being unassailable. I also know Tangier, and I assert that, if we abandon the

* "To strengthen the Mediterranean fleet to the requisite point would be to incur expenses which," etc. (p. 370).

Mediterranean, and rely on Mr. Laird Clowes's seal, 20,000 men and much fortification would be required to defend it. How many troops would be needed to establish and maintain control of Morocco no one can say. The new Red Sea fortresses also may be called upon to resist an attack in practically unlimited strength. They, too, must be strongly fortified and garrisoned. On the whole, I have no hesitation in stating that to carry out Mr. Laird Clowes's programme will require a capital expenditure of at least ten millions sterling and the addition of an Army Corps to our military establishments. Mr. Laird Clowes gives no hint of the dimensions of the "far bigger" naval force which he considers necessary to maintain the traditional policy of England. I cannot, therefore, frame a balance-sheet, nor can I discuss this involved question. I merely state my firm belief that, so far as France is concerned, we are at this moment perfectly able to make good our position in the Mediterranean, and that every instructed naval officer and politician across the Channel is well aware of the fact. In any case, the proper application of increased expenditure is to the Navy, and not to the frittering away of our strength by increasing an already large number of fortified ports. For, after all, it is upon the Navy alone that the efficacy of Mr. Laird Clowes's seals and the security of his various new fortresses must ultimately depend. If the Navy is permitted to operate in front of the latter, instead of in rear, they may be dispensed with altogether.

The fatal confusion of ideas which results from ignoring principles is illustrated in the following significant sentence: "The present policy of endeavouring to support the Mediterranean fleet by the Channel squadron is a mere penny-wise and pound-foolish makeshift." Mr. Laird Clowes must surely be aware that the peace strength of our Mediterranean fleet is determined by diplomatic considerations. With a view to avoid the appearance of the "provocative swagger" which he censures, the number of ships is deliberately restricted. At the same time, in

accordance with established custom, the Channel squadron visits the Mediterranean every year. I fail to understand what is meant by the phrase "endeavouring to support." It has never been possible in all cases to distribute navies in precise accordance with the strategic conditions arising on the outbreak of war, and the Mediterranean fleet has never been kept at war strength. This cheap "makeshift," as Mr. Laird Clowes contemptuously styles it, has the sanction of long experience even in days of storm. I presume him to infer that because the ships ready for mobilization at Toulon would render the French fleet numerically superior to our peace strength in the Mediterranean, our position is necessarily imperilled. Newly mobilized ships, however, require weeks to develop their full fighting powers. From Plymouth, a modern squadron would reach the Mediterranean in four days. There are some persons who appear to believe that a great naval war can break out without any warning whatever. They have not, however, explained the *modus operandi*, and remembering that a hundred years ago timely information of the proceedings at Toulon was forthcoming, it is inconceivable that in days of communication infinitely multiplied a fleet equipped and ready for action can issue thence as a bolt from the blue.

That naval wars are decided by fighting fleets, that naval strategy consists in bringing superior force to bear at decisive points, and that such decisive points are the positions, wherever they may be, of an enemy's fighting forces — all these axioms escape Mr. Laird Clowes's recognition. Readers of his article will derive the impression that naval war is an affair of bases, that one fortified station neutralizes another — Perim being "admirably situated for holding Obock in check"—and that a modern fleet cannot fight at all unless it has a base close under its lee. We breathe an atmosphere of fortification—"batteries," "heavy guns," "platforms," "munitions," "electric search lights," etc.—in which naval methods and naval traditions are stifled. Passive defence, of the utter

worthlessness of which China has just furnished a complete illustration, seems to inspire every page. The precepts and the practice of the great masters of naval war, from Drake to Nelson, are ruthlessly discarded. "Recent events in the Yellow Sea indicate clearly how risky it may be for a modern fleet to fight far removed from its bases," although the victorious fleet fought at eight hundred miles and the defeated fleet at one hundred and fifty miles from its base, which the latter reached to be evicted by menace, and ultimately destroyed in another much-fortified harbour. The balance of our naval forces "set free" by Mr. Laird Clowes's scheme, he would "like to see" distributed between the Cape and the East India commands. Why? Apparently because "the strategical importance of the Cape must increase year by year." The only real strategic points on the seas are, however, the positions of an enemy's squadrons, and how the Cape command can need reinforcement at a time when no possible enemy has any serious force in its waters, where, too, according to Mr. Laird Clowes, an enemy could hardly fight "so far removed" from his base, is not explained.

In conclusion, I will attempt briefly to sum up the situation which Mr. Laird Clowes proposes to create. The Mediterranean from end to end is a French lake. Our naval officers, who once knew its waters better than their rivals, have lost all their experience. The shore of Africa from 5° West longitude to the Southern mouth of the Red Sea is French territory. Egypt is a province of France, which extends far down the western shore of the Red Sea and embraces the vast basin of the Nile. France holds the Suez Canal, and can use it for her own purposes, while denying it to an enemy. The fleet which might have controlled that of Toulon, covered Port Said, Malta, and Gibraltar, and at the same time cut the important line of communications between France and Algiers, is split into two parts, and relegated to the ignominious task of watching the outlets of the Mediterranean and the Red sea. France can strike in force at either part at pleasure, and may

surprise one part at least. The short route to the East, and to the great French possession and future naval base of Madagascar, is in French hands. Malta, with its splendid defensive advantages and marvellous harbours, bisecting the distance between Toulon and Port Said, is ruled by the Pope. (Is Mr. Laird Clowes really serious in this part of his programme?) Four fortified positions, one of them (Tangier) being peculiarly vulnerable, are open to land attack in any force the French may choose to employ. Great Britain has on her hands Morocco, with a large and intensely fanatical population, and a long land frontier which sooner or later will march with that of France. Finally, when war breaks out, ideal training waters are at the disposal of France in which to perfect the manœuvring power of her fleets, and work up her raw reserves into full fighting efficiency.

The above is a simple statement of the results of the "bag and baggage" policy. Mr. Laird Clowes finds here "advantage," relief from burdens, "economy," and "ample compensations." I submit that, if he has removed a "millstone" from our necks, he has replaced it by a minor planet. By the adoption of his plan, the wildest dreams of the French Chauvinist would be realized. The principles successfully applied by Nelson in war are surely safer guides than the theories evolved by Mr. Laird Clowes in peace.

Above the purely naval aspects of the Mediterranean question stands the point of national honour. Our presence in the great inland sea dates back seven hundred years, and has been almost continuous for two hundred years, and unchallenged for ninety years. A balance of power has arisen, carrying with it international responsibilities which we have no right to discard. France, under Mr. Laird Clowes's rearrangement, becomes at once undisputed mistress of the inland sea, with a great accession of territory and power. To suddenly destroy an equilibrium long existing would in all probability involve a European war. We have no right to inflict this risk upon other

nations; we are bound in honour by our international responsibilities.

In the unknown realms of the future lie many problems whose solutions we cannot forecast. The ancient problem of the Mediterranean, however, is as clear as its blue waters. As it was solved in the past, so only can it be solved now and in the years to come. Pure reason and the long experience of great wars unite in pointing the way. National honour, splendid traditions, and the eternal principles of naval strategy alike forbid us to desert our commerce, and that of our colonies, on three thousand miles of the element which we have been taught by successive generations of sea officers to call our own, If we abandon the Mediterranean and hand over to our rival the spoils of a great naval victory, without obliging him to fire a shot, we give to the world the sure signs of that madness which, in the affairs of men and of nations, prefaces ruin.

G. S. C.

THE TRAINING AND SUPPLY OF NAVAL OFFICERS.

I.*

THE question of the training and supply of naval officers has engaged of late a good deal of public attention. On the one hand, we are told that the supply is miserably insufficient; on the other, that the training of such officers as we possess is ludicrously inadequate and demonstrably below the standard maintained in more than one foreign navy. These two questions are a good deal more closely connected than might at first sight appear. The alleged insufficiency of supply is at least partly accounted for by the fact that out of the total number of officers available for active service an appreciable percentage is constantly absorbed in educational courses of various kinds. I will take the case of lieutenants, for example, as the most numerous and important body of executive officers in the service—the "backbone" of the service, as they are often and very justly called. It appears from the Navy Estimates for 1894–95 that there are 800 lieutenants borne under effective votes for service in her Majesty's Fleet, 39 for service in the Coastguard on shore, and ten for "other services"—the latter being distributed, three under "educational services," two under "scientific services," two under "shipbuilding repairs and maintenance," and three under "armaments." For practical purposes and in round numbers, therefore, it may be assumed that there are in

* *Times*, Sept. 13, 1894.

all 850 lieutenants available for service afloat in case of emergency. Forty-nine of these have already been accounted for as employed in the Coastguard and "other services," leaving 800, it might be thought, for active service afloat. Of these 800 only 496, or just 62 per cent., are employed in ships on active service. The remaining 38 per cent. are distributed as follows:—In Coastguard ships and tenders, 46; in gunnery, torpedo, and training ships, 56; in stationary ships, 60; in surveying ships, 38; in troopships, Imperial and Indian, 24; in store ships, one; in drill ships, four; and in reserves, 75. Practically the Coastguard ships and reserves represent a reserve supply of 121 lieutenants immediately available for active service, because, in the event of mobilization, the Coastguard ships would at once receive their full complements and be sent to sea, and the officers employed "in reserves" could also presumably be summoned at once for service afloat. But the remaining 173 are already employed on active service, though they are not employed in seagoing ships of war. Stationary ships employ 60, surveying ships 38, troopships 24; of the remainder 60 are employed either as students or teachers in gunnery, torpedo, training, and drill ships. No account is taken in this enumeration of officers temporarily withdrawn from active service afloat for the purpose of study at the Royal Naval College at Greenwich; nor is it easy to ascertain the precise number of lieutenants so employed. But in the "estimated average number of officers to study at the College during the year 1894–95," given in the Navy Estimates, there are 115 "naval officers" proper, and of these a considerable proportion will doubtless be lieutenants.

It appears, then, that a redistribution of the actual number of lieutenants now in receipt of full pay and employed in various ways not directly connected with the active service of the Fleet might, without increasing the total number of lieutenants, result in no considerable increase in the supply of lieutenants available for active service. I do not advance this as a solution of the problem

of the supply of executive officers, but I may at least point to the remarks of a former First Lord of the Admiralty in his statement for 1891 as indicating a direction in which some relief may still be sought and found:—

"An investigation," wrote Lord George Hamilton, "into the actual duties which engage the naval service shows how large a proportion of officers and men are locked up in training establishments and educational courses, and in performing subsidiary work, such as surveying and transport of troops, etc. At the time when the ships in commission were insufficient to give adequate work and training to the officers and men of the Fleet such employment was judicious, but when the number of fighting vessels is so increased as to be more than able to employ and train the peace establishments, the employment of very highly trained and instructed men in work of so secondary a nature is a waste of power. I am therefore taking steps to reduce as far as I can the number of officers, men, and boys afloat in non-fighting vessels, and at the same time to shorten the general course of study for officers at the Naval College, and of gunnery and torpedo instruction for all but those who show special aptitude and ability. These changes will in course of time give some relief and increase the number available for foreign reliefs and active service at home."

The relief here contemplated is not very apparent, in a comparison of the Navy Estimates of 1893–94 with those of 1894–95. In the former year there were 52 lieutenants employed in gunnery, torpedo, and training ships; in the latter year there were 56. In 1893–94 there were 61 officers employed in stationary ships, and in 1894–95 there were 60 —no very appreciable relief, but still a slight move in the right direction. In surveying ships there were 32 in 1893–94 and there were 38 in 1894–95. In the trooping service, however, there had been a material gain, 41 lieutenants having been employed in 1893–94 against 24 in 1894–95. Thus on the services enumerated there had been a total gain of 18 lieutenants set free for service in fighting ships, but of these ten, or more than half, had been absorbed for educational and surveying services. Furthermore, the estimated number of naval officers to study at Greenwich had increased from 90 in 1893–94 to 115 in 1894–95, so that

Greenwich would seem to have absorbed the eight lieutenants who constituted the balance of gain obtained from non-fighting ships during the previous year. On the other hand, it is estimated that on the 1st of November, 1894, no fewer than 21 more ships would be in commission than there were in commission on the corresponding date of the previous year. This in itself would require a very considerable increase in the number of lieutenants available for active service in fighting ships. It seems manifest, therefore, either that we must move further and far more boldly in the direction indicated by Lord George Hamilton in his statement for 1891, or else that we must forthwith take steps for largely and speedily increasing the number of lieutenants available for active service. Probably both courses will be found to be necessary in the end, but a redistribution of the existing supply would afford the more immediate relief.

I shall be told, of course, that this is to lower the educational standard of the service, which, according to some authorities, is already deplorably low. But the question really is whether a naval officer is better educated ashore or afloat. History tells us, as was pointed out in the *Times* by "A Student of Naval History" on the anniversary of Trafalgar in 1893, that our naval supremacy was established by the victory of sea training over harbour training. Yet we are asked now to ignore this salutary teaching of experience, and to turn our naval officer into a walking encyclopædia of science. The following admonition has lately been addressed to "the children of Nelson":—

"There is now very little which a naval officer ought not to know. A hundred years ago seamanship, navigation, pilotage, and such elementary gunnery as there was sufficed, with experience, to place him on a par with the heads of his profession either in England or elsewhere; to-day, in order to raise him out of the ruck, he ought to know, in addition, much of chemistry, steam, law, electricity, pneumatics, hydrostatics, dynamics, metallurgy, and, above all, of current naval literature, home and foreign, together with at least a little of as many other subjects as possible. There is, too, more necessity than ever for him to be a man of

culture, to be able to read and speak one or two languages besides his own, and to be familiar with modern history and international politics."

Of course, if this view be accepted, it follows that our whole system of naval training is radically, fundamentally, and almost incurably wrong. The naval officer of the future ought on this assumption to be a man whose whole time is occupied in desk, book, lecture-room, laboratory, and workshop studies, though he might perhaps be permitted to go to sea occasionally as a necessary relaxation from the severe strain of his intellectual pursuits on shore, and as a politic concession to the antiquated notion that a seaman is only made at sea. In any case, it stands to reason that, if the naval officer of the future is to acquire the amount of knowledge here contemplated, or anything like it, he must henceforth spend far more of his time on shore, and therefore far less of it at sea than heretofore. I venture to insist, nevertheless, that the true ideal to be aimed at is almost exactly the reverse of this. Whether the age at which the young officer begins his career at sea should be raised or not is a question fairly open to discussion, though I do not propose to discuss it here. But it seems to me that, for such scientific training and general culture as the naval officer needs after his professional career has begun, we must rely mainly on the professional zeal of the class and the native aptitudes of the individual, and must rigidly discard an educational ideal which cannot but have the effect of making many naval officers smatterers, a few of them bookworms, and none of them seamen. The *Times* has already stated the issue in language which I venture to recall. In an article on the letter of "A Student of Naval History," above referred to, it said:—

"The naval officer cannot be made a seaman without constant experience of the sea. His proper training ground is the quarter-deck and the bridge of a sea-going ship at sea. It is not the mastery of scientific appliances, nor the chamber and lecture-room study of the sciences on which they depend, that makes a man a seaman of the type of Nelson and his officers. The sea itself is the

one element of a seaman's experience that cannot be reduced to book knowledge, and must be assimilated on the quarter-deck. A man is no more made a seaman by scientific study on shore than he is made an athlete by a knowledge of human physiology or of the chemical properties of food."

This, at any rate, is the view hitherto taken, in theory at least, by the Admiralty, though its practice may seem to be tending more and more to exalt harbour training over sea training. The Regulations of the Royal Naval College at Greenwich declare that "the College is organized to provide for the instruction of naval and marine officers in all branches of theoretical and scientific study bearing upon their profession; and is intended to give every advantage in respect of scientific education; but no arrangements exist at all prejudicing the important practical training in the active duties of the profession." Such is the theory of the matter; the scientific training is made strictly subordinate to the practical training. As a matter of fact, however, all lieutenants who desire to qualify as gunnery or torpedo officers must spend at least one session of nine months at the College in the study of mathematics, physics, chemistry, fortification, marine construction and drawing, and nautical surveying. At the close of the session these officers have to go through further and prolonged practical courses of instruction in the gunnery and torpedo ships, so that lieutenants desirous of qualifying in these branches after having served only one year in that rank at sea have to spend the better part of the next two years on shore. Besides this, a number of lieutenants, not exceeding thirty-five annually, are admitted to the same courses as voluntary students at the Royal Naval College, with a certain latitude of choice in respect of the particular subjects to be studied; and, on certain conditions of proficiency as tested in the examination, their time spent at the College is reckoned as harbour time on full pay. In special cases of approved diligence and ability such officers are even allowed to spend a second session at the College.

All this is unquestionably excellent in itself, but it

certainly seems to involve too complete and too prolonged a withdrawal of the naval officer from active duties at sea at a very critical period of his career. The truth is that the problem has never yet been sufficiently considered in this country of devising a system of combined practical and theoretical training adapted to the requirements of the average naval officer. For men of studious aptitudes and exceptional ability the College curriculum is probably not excessive; but it may be doubted whether the average officer and those whose bent is practical rather than studious gain more than they lose by a year spent at the College rather than at sea. If the question be tested by the teaching of history, the conclusion is inevitable and irresistible that sea training is immeasurably superior to theoretical study in the education of the naval officer for war. If, on the other hand, it be contended that in a scientific age like the present the naval officer must be scientific before all things, then we must bring the issue so far as we can to the test of actual and present experience. This may be done in a variety of ways. I find, for example, that in the German navy, where the claims of science and theoretical training are perhaps least likely to be overlooked, the operations at sea, associated with the annual manœuvres, were extended over several months in 1893, beginning as early as April and lasting until the end of the summer. I find that in the American navy the summer programme of the Naval War College—an institution to which we were indebted for the invaluable historical labours of Captain Mahan—is based on a judicious and singularly interesting combination of practical and theoretical training. Theoretical training is not neglected, but it is subordinated to the practical study of a definite strategic problem. I take the following summary description of the programme from an article in the New York *Sun*:—

"Its central feature is the study and solution of a great problem in warfare—namely, the methods of meeting and defeating a formidable naval attack against the outer line of the defences of New York, at the eastern extremity of Long Island Sound. Upon

this all the summer operations, except the highly important and timely course in international law, will more or less directly bear. The schedule which covers June, July, August, and September contains instruction in strategy, in naval tactics, in coast defence, in the elements of war charts, in torpedo warfare, in the maritime interests of this country, in the use of the ram, in the employment of the marine corps for coast defence, in types of ships, in steam engineering, in the armour and other protection of vessels, in the supply of coal and other stores, in rations and hygiene on ship-board, in ordnance, in electricity for war purposes, in naval history. But all along the application of these studies to the particular problem of the year will be borne in mind. There will be reconnoissances in steam launches of the points and lines mentioned in the problem; there will be personal study of localities; there will be signalling and mental training by war games; there will be examinations of the resources of the ports mentioned, and discussions of the enemy's bases and other features of the problem."

Many points in this programme may fairly be open to criticism; but its essential and characteristic feature is the subordination of theoretical studies to practical training for war. The practical methods contemplated are certainly inferior to those usually employed in our own manœuvres, but the combination of the practical and theoretical elements is a feature sadly wanting in our own system of naval training, and the inferiority of the practical methods employed is the result not of design but of necessity. "Our lack of a powerful home squadron," says the same writer in a subsequent paragraph, "does not permit summer manœuvres on the scale annually practised by other nations, or, indeed, for the present upon any scale at all; but the system of steam-launch work, with reconnoissances of every spot indicated, make the problem far different from simple desk work."

This is how the problem of naval training is approached in one of the most enterprising and ambitious of modern navies—theoretical training strictly subordinated to a strategic and practical purpose, theoretical training combined with such practical experience as is available, and based on the assumption that the business of naval officers

is with the sea and its problems, not on the hypothesis that all naval officers must acquire some smattering of mathematics and science, apparently in the hope that a few of them may become not Nelsons, but Newtons.

Now let me contrast the system pursued in France and its results. The writer quoted above reproaches the "children of Nelson" with their inferiority to the foreign product of high scientific training, and declares that "the British officer often compares most unfavourably with foreign officers." In particular he affirms that "the French navy is essentially progressive and therefore essentially modern." Now, whether this means that the French naval officer is better trained in the theory or better trained in the practice of his profession, it ought certainly to imply that, either by virtue of his superior theoretical training or by virtue of his larger practical experience, or by a judicious combination of both, he is better fitted for actual service at sea. Whether this is so or not I cannot say, and perhaps a single instance is no adequate criterion. But I can cite a single instance in which, though the French officers engaged may all have been Newtons, they failed in their enterprise more egregiously and, I am satisfied, far more completely than any one would believe it possible for the stupidest and least educated of British sub-lieutenants to fail in a like case. This happened in the French Channel Manœuvres of last year. Admiral Barrera, in command of a sea-going fleet whose *maximum* speed was nine knots, was required to force the passage of the Straits of Dover, which was guarded by the torpedo-boats and other light craft belonging to the Défense Mobile of the adjacent French coast. The time of Barrera's advance was known beforehand within certain narrow limits, and might have been ascertained almost exactly by scouting operations judiciously adapted to the situation. The night selected was dark, but not foggy, and, though the fleet advanced without lights, it ought not to have been difficult to detect it in a channel barely twenty miles wide. It passed at midnight entirely unmolested, and, having proceeded as

far as the Varne without sighting a single enemy, it bore up for Boulogne, capturing on its way a whole division of torpedo-boats,—which, having proved entirely useless for purposes of patrol and defence, now showed their inability even to escape,—and surprising another division with its attendant gunboat actually at anchor off Boulogne. Almost the only other noteworthy incident of this remarkable campaign was the futile attack of two torpedo-boats on the *Isly* in broad daylight, which resulted in their speedy destruction. Now torpedo-boat warfare is supposed to be one of the peculiar specialities of the French navy, and the French naval officers are the representatives of a service "which is essentially progressive and therefore essentially modern." After all, however, the proof of the pudding is in the eating, and, if this is to be the result of requiring the naval officer to know "much of chemistry, steam, law, electricity, pneumatics, hydraulics, hydrostatics, dynamics, metallurgy," to say nothing of naval literature, modern languages, modern history, and modern politics, I am satisfied that English common sense will still insist that the children of Nelson should be trained in the school and spirit of Nelson himself.

II.*

TO-MORROW is the anniversary of Trafalgar. Eighty-nine years ago, on the morning of October 21, 1805, Nelson made to his fleet that immortal signal which has ever since been the watchword of the British Navy and one of the noblest traditions of the nation; and before the sun set Napoleon's hopes of subduing England had been finally shattered, and the greatest seaman the world has ever known had breathed his last. The lessons suggested by this memorable anniversary are innumerable and inexhaustible. Trafalgar was the crowning exploit of a Navy which for centuries had claimed for England the "sovereignty

* *Times*, October 20, 1894.

of the seas." It was the final overthrow of a naval combination, directed against England by the man who had made himself master of Europe, and, but for England, would have been master of the world. From it, if we read it aright, may be deduced those indefeasible and eternal principles of naval policy and conduct which, amid all the vicissitudes of circumstance, lie at the root of sea power. A year ago, in a letter addressed to the *Times*, a "Student of Naval Warfare" forcibly pointed the moral of Trafalgar. The lesson he inculcated was twofold—first, that Nelson, the greatest master of naval warfare, was also a profound student of naval history, and, second, that at Trafalgar the superior harbour-trained fleet was defeated and destroyed by a fleet inferior in numbers and armament, but superior in the nautical aptitudes engendered by sustained experience of the sea. I propose to follow his example, and to preach from the same text—the text that nowadays the children of Nelson must acquire the aptitudes which make for victory in the same school as that in which Nelson and his heroes acquired them.

I have already had my say on this subject in the *Times*, and I am not about to repeat the arguments I have formerly advanced; but it may not be amiss to expand and illustrate them, and incidentally to make some reply to the only serious criticism they have encountered in the same place. Indeed, I hardly know whether I ought to regard the criticism in question as serious. I do not know who "A Late Captain of a Battleship" may be; but I strongly suspect that he is an esteemed friend of mine, who must have his joke, and whose jokes I always appreciate, though, when he is really serious, I seldom differ from him without suspecting myself to be in the wrong. As I cannot possibly agree with him in his views on "The Training of Naval Officers," I prefer to think that he must have been joking. We are asked to bear in mind "that the only people who have any extra work at sea (exclusive of the engine-room complement) are the captain, the navigating officer, and the officers of watches." Well, I was speaking

of the training of naval officers, not of the training of blue-jackets, and therefore the critic really concedes the case. There is a good deal to be said on the subject of the sea training of blue-jackets, and some persons, whose opinion "A Late Captain" would, I am sure, respect, are apt to think that a blue-jacket on Whale Island or in naval barracks is not quite so well employed as a blue-jacket in a sea-going ship at sea. But, without pressing that point, I would urge that, if the captain, the navigating officer, the officers of watches, and the whole of the engine-room complement are acquiring at sea experience and aptitudes which are indispensable to their efficiency and cannot be acquired except at sea, the case for sea training as against harbour training is admitted even by "A Late Captain" to be at least as strong as I contend.

So, again, "A Late Captain" concedes the point when he says, in his humorous fashion, "Ships should undoubtedly spend some portion of their time at sea, to inure the men to the motion of the ship and to train the stokers." Why, this is exactly what Captain Mahan says about Nelson and his fleets:—

> "Continually cruising, not singly, but in squadrons more or less numerous, the ships were ever on the drill-ground—nay, on the battle-field—experiencing all the varying phases impressed upon it by the changes of the ocean. Thus practised and hardened into perfect machines, though inferior in numbers, they were continually superior in force and mobility to their opponents."

This is the kernel of the whole matter. "The sea itself," as the *Times* has said, "is the one element of a seaman's experience that cannot be reduced to book knowledge, and must be assimilated on the quarter-deck." "Now, we do not want sailors," says "A Late Captain," and this is true. The special art of the sailor is as obsolete in modern warships as the special art of the bowman. But we want seamen as much as ever, and seamen can only be made at sea. By seamen, I mean not only men inured to the motion of the ship—though men not inured to the motion of the ship would surely be very indifferent seamen at a pinch—but

men constantly, as Captain Mahan says, "on the drill ground—nay, on the battle-field—experiencing all the varying phases impressed upon it by the changes of the ocean." When men traversed the sea by means of vessels propelled by oars, they did not need to be sailors, but they did need to be seamen. Now that men traverse the sea by means of vessels propelled by steam, they no longer need to be sailors, but they need to be seamen as much as ever. "We want," says "A Late Captain," "mechanics, electricians, and stoker-gunners." No doubt we do, but we want them all to be seamen as well. Would "A Late Captain" like to take his battleship into action manned by "mechanics, electricians, and stoker-gunners" who were not seamen? I fancy not.

Surely, too, he must be merely joking when he writes:—"One seaman, under the direction of the quartermaster, and the officer of the watch, twiddles a steam wheel around from right to left, or from left to right, and has a vague sort of notion that one way is called 'starboard' and the other 'port,' but usually puts it the wrong way unless closely watched"; or again, "In the vicinity of land two men swing leads over their heads, and occasionally shout something unintelligible; but they never get bottom, and no one pays any attention to them." I am no seaman myself, so perhaps I have no right to protest against pretty fooling of this kind. But I suppose no one knows better than "A Late Captain" that it is fooling, and nothing else. As regards leadsmen and their use, I need only refer to the narrative quoted below. I wonder whether "A Late Captain" would care to take his battleship, say, from Roche's Point to Haulbowline without leadsmen in the chains—though I suspect he knows that particular anchorage as well as I know the place in which I live. As regards the helmsman, I am tempted to narrate a little anecdote. Some years ago I was watching the evolutions of a fleet during the manœuvres from the poop of the flagship. The signal had been hoisted for the evolution known as the "gridiron," which requires the ships in two parallel columns

to turn towards each other, and each to pass through an interval in the opposite column. The columns had already turned inwards, and were fast approaching each other when the captain of a battleship, notorious for her erratic steering, signalled to the Admiral, "My ship steers very wildly." "Is that hole big enough for you to get through?" was the Admiral's query in reply. "I think so," answered the captain, and, wildly as his ship steered, his own seamanship and that of his helmsman took her through triumphantly. This little incident impressed me greatly, and though I do not know who "A Late Captain" is, I know who the captain in question was, and I know him to be a thorough seaman as well as a man of infinite jest.

But the question is not merely one of argument. The proof of the pudding is in the eating. Why is it that English naval officers are constantly found capable of doing things which the officers of other navies do not even attempt—leaving an anchorage at midnight without navigation lights and in the teeth of a storm, as Admiral Hornby took his fleet out of Blacksod Bay during the manœuvres of 1885; maintaining course and station for hours together in a fog, as Admiral Baird did in 1889, when he brought his whole fleet round from St. David's Head to St. Alban's Head without once being able to make a single visible signal; or entering a foreign harbour without taking a local pilot, as British admirals and British captains are constantly doing in all parts of the world? The answer is that, in spite of some ill-judged attempts to make our modern naval officers mathematicians, mechanicians, electricians, and what not, and some mischievous tendencies which make for the ascendency of harbour training over sea training, the children of Nelson are still worthy of their sires—still seamen in the sense of men trained to the emergencies of the sea, apt to command, prompt to obey, self-reliant, and full of resource. How long they will retain these inestimable qualities if some of their critics and counsellors have their way is a question of vital moment to the nation.

I do not know whether such performances as I have mentioned above can be paralleled in other navies—navies whose officers are said to be much more scientifically trained than ours—but I do know that they are no very exceptional performances in our Navy. I know, too, that a few years ago it was stated in the French newspapers, that if a fog came on during the manœuvres of the French fleets, a truce was proclaimed between the contending squadrons until it lifted. I know that, when a portion of the Toulon fleet was cruising in the Atlantic a year or two ago, the Admiral in command obtained the services of local pilots to take it into Brest. I can also quote an impartial witness to the contrast between the training of our own naval officers and that of the officers of the United States Navy, in an extract from a Boston newspaper—a piece of testimony whose weight is not a little enhanced by the fact that the extract in question was sent by Admiral Luce, of the United States Navy, to Admiral Sir Vesey Hamilton (who kindly allows me to use it), as expressing in substance his own views formed after a visit to this country, during which the gallant Admiral specially devoted himself to the study of our methods of naval training:—

"Last year the words of Admiral Sir John Hopkins in favour of educating officers at sea, and the example of the sturdy little English reefers doing boat duty and in other responsible places, while American cadets were studying logarithms, created a very strong impression in favour of shortening the term at Annapolis and lengthening the term at sea. . . . Everything pertaining to this highly scientific education is purely experimental, for there is nothing in the whole course that tests the question of whether the cadet is adapted for a sea officer. Unless he knows how to command men, he may be a second Laplace in his studies, but he will be of no earthly account in the navy. Or he may be a Nelson on board ship, but unless he has a knack for reciting in the classroom, he cannot get a commission . . . The young gentleman . . . is apt to be cocky and to make the grizzled lieutenants ill and weary with his theories of how things should be done, which is always exactly opposed to the way in which they have heretofore been done. The English middies are caught young, and the first thing they learn is the last thing the American

cadets learn—how to control men and to assume responsibility. A fifteen-year-old midshipman in the British Navy has charge of a boat, and he is responsible for that boat and every man in it, under all circumstances, in all weathers, and at all times. The American cadet by the time he gets a boat is a young collegian, with his head stuffed full of theories, very well advanced in his studies, but he has not washed his face in salt water like the British fellow of his age, who by that time is quite an old and experienced tar."

There are some inaccuracies in this trenchant contrast, but it points a salutary moral, and may serve to show that the children of Nelson who have "washed their faces in salt water" are not found by impartial observers to contrast very unfavourably with their more scientific contemporaries trained in harbour and at college. It is the old story of Trafalgar again, the victory of the seaman over the bookman. "There is nothing," wrote Villeneuve before quitting Toulon, "to alarm us in the sight of an English fleet; their 74-gun ships have not five hundred men on board; the seamen are harassed by a two years' cruise; they are not more brave than we are. . . . They are skilful at manœuvring. In a month we shall be as much so as they are." More brave than their adversaries Nelson's seamen were not. But Villeneuve knew well enough that it was not a month, nor many months, at sea that would give his ships the skill of manœuvre which Nelson's had acquired by constant experience at sea. Harassed, indeed, they were by a two years' cruise, but while harassed they were hardened. As Captain Mahan says in a noble passage:—

"Nelson was wearing away the last two years of his glorious but suffering life, fighting the fierce north-westers of the Gulf of Lyon, and questioning, questioning continually whether Napoleon's object was Egypt again or Great Britain really. They were dull, weary, eventless months, those months of watching and waiting of the big ships before the French arsenals. Purposeless they surely seemed to many, but they saved England. The world has never seen a more impressive demonstration of the influence of sea power upon its history. Those far distant, storm-beaten ships, upon which the Grand Army never looked, stood between it and the dominion of the world."

These two years were typical of the training that makes the seaman. Not all the mathematics, nor all the scientific gunnery, nor all the book learning in the world can make a man a seaman if he does not constantly "wash his face in salt water." In war this means victory, as the world learnt at Trafalgar. In peace it means exactly the same thing, superiority of sea aptitude and superior capacity to deal with all the emergencies of the sea as they arise. This is the one constant factor in a seaman's training, and it is practically independent of the particular weapons with which at any given period the seaman has to fight.

Of course, in time of peace the naval officer cannot be trained, as Nelson's officers were trained, in the actual experience of warfare. But there is one mode of warfare, the conflict with the sea and its conditions, which Nature herself perpetually imposes on the seaman. How does the British naval officer acquit himself in this conflict? I have already cited one or two cases which may serve to answer the question. By the courtesy of Sir Vesey Hamilton, to whom I am indebted for the documents I am about to quote, I am able to cite one or two more, and I think I shall be able to show that the children of Nelson are not unworthy of their sires.

Nelson says somewhere that the naval officer, unlike his military brother, can form no fixed plans; he must be prepared for the chance when it occurs; it may be to-day, a week or a year hence, or never. The thing is to be ready for it when it does occur. Well, that is exactly the spirit of the British naval officer of to-day, as the following story will show. It relates to the opening of the Zambesi to free navigation in 1890. The bare facts are recorded in the "Annual Register" as follows:—

"A British naval force left Zanzibar on September 3 for the Zambesi River, and, though opposed by the captain of a Portuguese gunboat, who disputed the passage, the river was entered by the *Redbreast*, of eight hundred tons, with several other vessels, after some difficulty with the sandbars at the mouth, towards the end of the month. In future the Zambesi will be kept open, a free waterway for all nations, Portugal alone protesting."

I have before me a private narrative written by an officer who bore a leading part in this very delicate and difficult business. It is too long, and perhaps too personal, to quote in full; but I think the following extracts which, without giving names, I am permitted by Sir Vesey Hamilton to cite, will serve to show the nature of the work undertaken and the brilliancy of its execution—

"We did not reach the Chinde mouth till too late on the 9th to cross the bar. . . . I went in at seven o'clock next morning to examine the bar and put down a buoy or two, and never had a worse surveying job in my life. . . . —— of the *Humber* came at last, in his bigger boat, and between us we managed to get some idea of what was before us and returned at noon with a most unfavourable report, which must have made —— shake in his shoes, for we'd only got 11 ft., and there was only one more hour's flood; however, with a two-foot rise in that hour which the lead-line showed he most pluckily determined to risk it. . . . This Chinde bar had been held up to us as our grave difficulty, as our very certain danger, if we attempted it under any but the most favourable circumstances, and here it was dead neaps and blowing fresh; if the *Humber* and *Buccaneer* had struck they must certainly have been wrecked, so —— ordered us, drawing 13 ft. 2 ins. to lead him, drawing 13 ft. 4 ins., and sent —— to bring on the *Buccaneer*. . . . Off we started, just at the top of the flood; as we got into 18ft. we began signalling each cast; we were soon in 15 ft. and then in 14 ft., which I wouldn't hoist for fear of frightening the *Humber;* it would have been worse for him to turn back, than to ram her over, but immediately after it deepened to 15 ft. again, and soon we were over, and it was a relief. . . . By four p.m. we were at anchor; it's all pretty easy now we've done it, but I felt just like it must be before going into action. . . .

"The first thing of course was to set up a tide-pole (I had one prepared on the way down); but the creek I clumsily selected had a bar considerably above the level of L. W. (low water) springs, and we lost the first day's observations (the day of new moon, too), and had to bring it out, and set it up on a very shelving foreshore, so that at H. W. (high water) it was dangerously far out, seeing how strong the tides run; but we got a sort of raft knocked up, laid in and out at the pole, and by means of an endless rope hauled out and back to read off at night. It was endless anxiety to me, and we always kept a lifeboat ready, and had to use her too. Bang! would go the rifle, 'Away lifeboat!' and each time an unfortunate was found

overboard holding on to the raft half drowned, lantern sunk, and frightened to death; and one night they dared not take the tides because of the number of hippos round the tent. . . .

"Well, in course of time I arrived actually in the Zambesi, worrying my poor chaps dreadfully, turning out at four a.m., and leaving for a long day at five o'clock; but it was well we stuck to it, for I still wanted to continue the work as far up the Zambesi as McChenga, and one day went off as usual, but found a Portuguese gunboat at Sombo, who objected to my further progress, and I had to give it up for good. It was rather exasperating, for on the strength of what I had seen I had sent a report to the admiral to say that it would be possible to take this ship up, but I badly wanted to examine the last three miles more thoroughly. . . . It would have been very disappointing, though at the same time a relief, if he had sent to me to say, 'Don't attempt it.' Instead, however, down came the Pigeon the day before the boats were to start, bringing me a private letter from the Commander-in-Chief that would have made any officer jump her over a stone wall, . . . and just at the very end of his letter he adds, evidently feeling it was a considerable risk, 'If you do not see your way to go up Chinde after all, give it up. I do wish you to go, but I know it is narrow'—he little knew, no more did I, how narrow! . . . I do assure you that I felt a most confounded lot of responsibility on me. To complete the bad aspect, it was dead neaps, and a most abnormal one; for two days past our range had been only 2 ft. to 3 ft., and the whole rise above L.W. springs only 5 ft.; however, it was no use hanging back now. I had some capital leadsmen whom I had taken frequently up the river to practise them, and it was arranged that we should leave at half past six on the 18th. . . . This ship steered beautifully, answering in a moment as if one was speaking to her; and as I knew the river very well by now, it was only a matter requiring extreme vigilance and careful attention, and we reached Sombo before ten o'clock.

"Before we got there the Portuguese had opened for a moment, and we saw that he was so swung that we could get by. Here was apprehension No. 1 relieved, and we went past him, and dropped an anchor from the stern on the up river side of him, signalling *Herald* to anchor instantly, which was done, and so he was between two fires and the game was up. He came on board to see me immediately, and found my cabin full of filled hoppers and a Nordenfelt bearing on his ship out of the cabin port. . . ."

I pass over the account of an interview with the Portuguese Governor, which really reads like a page from Mr. Rudyard Kipling, who must have had some such incident

in his mind when he wrote one of his "Many Inventions"; but in such a case it is perhaps as well to let bygones be bygones. The narrative continues:—

". . . And then we weighed and proceeded, commencing the really difficult part of the river. The water was desperately bad. I had never known it so bad; but we managed all right till we arrived at a certain bad reach I knew, and then I dared not go on without an examination, so had to anchor by the stern and bow in 23 ft. on the port side and 7 ft. on the starboard. Got away in steam pinnace, and found we could get 14 ft. by careful management, and raced back, a valuable half hour at the very top of the tide lost. Got under way, and managed it all safe. The next reach is all right, but then comes another very bad—and though we crossed in safety in 13½ ft. and 14 ft., we stuck fast a short distance on, though only 30 ft. from the steep bank. Well, we backed off easily enough in a few minutes and then laid her right against the bank, and so got through another half mile, getting 14 ft. and 15 ft. in the port chains, and 11 ft. only in the starboard, a regular gutter way. . . . Only one difficulty now remained—viz. the bar at Chinde village, no marks when to turn, no saying what was on it, for though I had long ago sent on *Herald* to bring me information, he had not returned, and wasn't in sight, but had rounded into the Zambesi. Sure enough, I piled her well up, through not turning soon enough, as it turned out afterwards, when I made a thorough examination in a boat; and there we stuck with a falling tide running 13 ft. all along the port side, 5 ft. under starboard chains, and 10 ft. under starboard counter. I worked the men about the decks and did the usual things; first tried to force her over, but no! it wouldn't do; but at last backed her off, and getting her stern against the bank, her bow canted, happily the right way, and we shot her over 13 ft., drawing 13 ft. 2 ins., and had done it. I believe I was the happiest man in the Navy at that moment, and the men were so pleased and officers congratulated me, it was like winning a successful action. We anchored for the night in 24 ft., but no room to swing, and in the middle of the night, and again next forenoon, I had to shorten in to let the tide take her stern past the bank, but it was calm that evening and tide weak. . . .

"Bad weather had been brewing for the past five days, and at last we had got it. Tide did not serve till two o'clock, and at ten o'clock it came on half a gale and driving rain—a wretched berth to lie in at very short stay, and the attempt to return down the river seeming hopeless, I had got away surveying by seven o'clock, but couldn't get more than two hours' work done, and so didn't reach McChenga, though I got somewhere near; returned at

half-past ten and went round into Chinde Bar, found the best channel and laid a small buoy, and decided on a patch of reeds to steer for, and came back to await events. It was unpromising and I couldn't decide to make the venture, but at half-past one went to the bar again, found 13 ft., and yet another hour's flood, decided to risk it, dashed back, and got the anchor up, had a desperate job to turn her sharp into the Chinde with a gale blowing and flood setting us in, and once ran her straight into the steep bank, the dolphin striker tickling about in the grass, but we did turn her, pointed her head right, and crossed with 13½ ft. of water and some hour more flood yet to make; it was a capital tide to-day, but very delicate steering, as she often had to be brought round up to the strong wind; the driving rain made it hard to see accurately, but the leadsmen nobly did their duty, and the way young ——, the navigator, steered her was beyond praise; and to cut a long story short, we ran her through in daylight without once touching, and anchored soon after sunset near the old *Humber*, happy as kings to have done it. I am now very sure that the Chinde is navigable for a ship of this length and draught at all times of the year, and pretty certainly in all years; for it is said never to have been known so low as this particular one."

Now this plain unvarnished narrative, written in the confidence of privacy and never intended either for publication or for official purposes of any kind, is not to be regarded as illustrating merely the skill and pluck of a particular officer, or as recording any exceptional exploit. I cite it as illustrating the normal manner in which the British naval officer goes about the performance of any duty which happens to fall in his way, and I contend that the aptitudes it reveals are only to be engendered by the practical training of the seaman. Desk studies and book learning, and the profound scientific lore of Greenwich, the *Excellent*, and the *Vernon* are all very well in their way. For certain subsidiary purposes of naval warfare, and for a few officers specially fitted by native aptitude for the pursuit of such purposes they are, no doubt, indispensable. But in such exploits as the opening of the Zambesi, they count for next to nothing, and the qualities required, and displayed, are such as no theoretical training can impart. For energy, pluck, skill, and resource, the men who first established the

navigation of the Zambesi may safely claim to be worthy children of Nelson. They were not picked men in any way. They were merely British naval officers and blue-jackets, who got a better chance than some of their fellows of showing what sort of stuff the service is made of, and I confess I think we have no sort of reason to be dissatisfied with the sample.

One more illustration of the same temper and its results and I have done. I am again indebted to Sir Vesey Hamilton for permission to use a private narrative of the salvage of the *Seignelay*, a French man-of-war which went on shore during a cruise, and was got off again by the efforts of the *Undaunted*, when under the command of Lord Charles Beresford. Of that distinguished officer's energy, capacity and fertility of resource the country is well aware, and I should hardly think it necessary to cite the narrative I am about to quote if he alone were concerned. The country knows the quality of its captains and its "late captains." It is just as well that it should learn a little more of the sort of stuff out of which they are made. "I had the happiness to command a band of brothers," said Nelson of the officers who fought under him at the Nile. Not even the energy and resource of Lord Charles Beresford would have got off the *Seignelay* so brilliantly, if he, too, like other captains, had not had the happiness to command a body of officers and men who "had washed their faces in salt water," and learnt their seamanship in the school and spirit of Nelson. The narrative is taken from a private letter, written by an officer of the *Undaunted*. As before, I suppress names and omit some few passages, mainly for the sake of brevity:—

"We got the telegram giving the news at one a.m. on Tuesday. Set to at once unrigging our ballroom and pulling to pieces our decorations, getting off gear we had landed, etc., and at daylight were steaming full speed the two hundred and seventy miles to this place, leaving telegrams to put off our three hundred guests. It was a good sample of the vicissitudes of naval life, and I think we all rather enjoyed it—at any rate, all set to with a will.

"At daylight this morning we found the French ship *Seignelay*,

of one thousand nine hundred tons, driven high up on a sandy beach, apparently very contented, and having taken no steps whatever in forty-eight hours to get themselves off. . . . The captain could get no definite reply out of them, so now we have sent a big working party on board, and are unloading the ship for them, have laid out anchors astern of them, and generally done more work in the day than they seem likely to have done in a week. . . .

"The ship parted her cable in a gale of wind, had no second anchor ready, no look-out was being kept, and the ship was piled up before the captain or officers knew anything about it. Fortunately she drove on a light sandy beach, where she made a dock for herself, and has suffered but little damage, but so embedded in sand and shoal water running so far out that it will be difficult to haul her off.

"May 5.—A week to be long remembered is over and so happily. The French captain telegraphed that his ship was hopelessly lost; they sent a squadron of three ships to take the men and stores back to France, and they arrived to find her quietly at her anchors and almost undamaged. . . . The senior French captain of the arriving squadron said, 'You English do not know the word "impossible"!'

". . . . The *Seignelay* first said all help was useless. . . . On our arrival, after hearing the state of affairs, our skipper went aboard with an anchor and cable in our launch, laid it out astern and gave them the end, saying:—'Of course you will want it, so will haul it taut.' . . . Then he said, 'Of course you have only been waiting for more men to lighten the ship, so I am sending one hundred and thirty, with an officer to act as interpreter.' . . . Our first lieutenant went as interpreter, and all our captain wanted done was 'suggested' by him to the French. He gave the orders to the junior officers over our men, and I believe worked the French crew also by his 'suggestions,' a fine old sailor, who was one of their chief petty officers, giving what orders were necessary. . . . He hardly left the deck for three days or nights, and did his work splendidly. . . .

"The difficulty of the situation was that, owing to the great extent of shoal water, we could not get within eight hundred and fifty yards of her, though the *Melita's* light draught enabled her to get within three hundred. The ship was embedded five and a half feet in the sand, so had to be lightened that much before we could hope to move her. This we spent all Wednesday afternoon and night in doing.

"On Thursday morning the *Melita*, with a light draught Turkish steamer, tried to pull her off, but failed, while the *Melita* was very nearly wrecked herself; nothing but very smart seamanship in making sail and casting off hawsers with cool judgment on the

part of —— saved her from being dashed in a good sea upon a jagged reef of rocks close to leeward. Her screw got fouled, and the willing but awkward *Turk* towed her head round towards the reef, and she only just managed to get sail on her and shave it by fifty yards. She could not anchor or she would have swung on top of it. We were looking on, powerless, from our deep draught of water, though we hurried out hawsers, but it was one of the nearest shaves I have seen, and with the large number of men they had away in working parties, a thing to be very proud of and thankful for.

"All Thursday we worked on at lightening her, getting out three hundred tons of coal, all her shot, shell, small guns, provisions, and cables on board our ship till every part of the ship was piled up with them, and all our nicely painted boats reduced to ragged cargo boats, besides being a good deal damaged, owing to the exposed anchorage and seaway.

"We got out our one strong and two light wire hawsers, and with them the two ships tried to tow, but we parted the light hawsers at once. Then the captain let me try a plan I had all along been urging, but which he, ——, and the French called a 'physical impossibility.' We hired native boats and large lighters, got our strong chain cables into them, and laid out four hundred and fifty yards of chain cable between the *Melita* and ourselves, floated on these lighters. Thanks to the skill of our boatswain and a picked party of men in the lighters, this was done most successfully, though three lighters were sunk or destroyed in doing it.

"That afternoon (Friday, the 1st)—having got four hundred and fifty tons out of the ship in forty-four hours—we got a fair pull at her with all three ships, the little *Turk* tugging manfully at his rotten hawser on one quarter and giving her a side pull occasionally. We gradually worked our mighty engines up to full speed, the chain cable tautened out as I had never seen chain do before, and off she came.

"We manned the rigging and gave her cheer on cheer, the band playing the 'Marseillaise' as the *Melita* towed her past our stern, while the Frenchmen hugged and kissed our men on their cheeks. . . . It was a scene to be long remembered, the crowds of spectators lining the beach and walls, and our own men 'spent but victorious' after their long forty-four hours of almost unceasing work, hardly any one lying down for more than three or four hours on either night.

"Once off, I must say the Frenchmen worked famously, and by noon on Saturday we had replaced all their gear on board, picked up their anchors and cables, etc., so that when their squadron came in that evening they found nothing left to do.

They were really grateful and showed much good feeling, coming to call on us and being most friendly. . . .

"On Monday night, when we left, the whole squadron cheered us manfully. I had charge of the work in our own ship, the laying out hawsers, cables, and anchors. All our picked men were sent to the *Seignelay*, and I worked those remaining almost continuously, yet I never heard a grumble, nor had I to punish a single man. Never in my life have I seen men work so hard and so cheerily; again and again it made me sing with thankfulness to have such fellows under me. Our mids. worked famously; they were watch and watch in the boats and on deck, the mere lads of sixteen and a [half, only a year and a half out of the Britannia, proving most self-reliant and capable. I was glad to be able to tell them afterwards how well I thought they had borne the strain put on them, and that —— also said he had never seen boats better handled; the lads were so pleased."

NOTE.—I have only to add to the foregoing, what considerations of space alone prevented my saying at the time, that nothing in the English officer's narrative of the salvage of the *Seignelay* can have been written, or ought to be taken, to imply the slightest reflection on the professional capacity of the French captain and his officers. Until the *Undaunted* appeared quite unexpectedly on the scene, there was no prospect and indeed no possibility of getting the *Seignelay* off. Hence, there was no reason whatever why steps should have been taken to get her off before the *Undaunted* arrived. When she did arrive the case was changed, and as Sir Vesey Hamilton pointed out at the time, "the quantity of weight removed from the *Seignelay*, without which she would not have come off even with the *Undaunted's* steam, and the rapid manner the stores were got on board and the *Seignelay* prepared for sea after being floated, could not have been accomplished had her crew not done their work with equal ardour as our people did, which every sailor reading between the lines understands. . . . It must, moreover, be remembered that the captain of the *Seignelay* was the only person responsible. Is is not every one who would have risen to the then improbable chance of the *Undaunted's* being able to drag his ship off through so much sand; but he did it, and

saved her." I could not have made this comment myself with the authority which belongs to Sir Vesey Hamilton, and therefore I am very glad to be able to quote his remarks on the subject. I need only append the concluding sentence of a letter which I subsequently addressed to the *Times* when I learnt from Sir Vesey Hamilton that he thought some passages in the narrative quoted above might suggest to the mind of a landsman reflections on the captain and officers of the *Seignelay* which no sailor would entertain :—"I should be sorry indeed if an international episode which displays so happily the friendly relations of two great services were to be turned into an occasion for invidiously and quite unwarrantably exalting one at the expense of the other."

J. R. T.

to defence—its tactics, if the term can with any propriety be applied to a weapon which, once deposited in the fighting line, remains there till it has expended itself or become unserviceable. The special knowledge of a Small-Arms Committee is not required for the elucidation of Infantry tactics, and submarine mines cannot be permitted to claim immunity from free discussion on the grounds of their peculiar abstruseness. Such a claim would, in fact, be a dangerous one to prefer, for if the arrangements of submarine mining defence are beyond the powers of comprehension of the officer of ordinary scientific attainment, their fitness for purposes of war may fairly be questioned.

Each nation pretends keen anxiety as to the secrecy of its apparatus, and each knows all about its neighbours' paraphernalia. The fiction of mystery must perhaps be maintained in regard to a weapon for which moral effect is extensively claimed. Above and beyond the purely technical aspects of the submarine mine, there lies a sufficiently wide field for discussion, which is too generally neglected.

The questions which it is proposed to examine—which ought on every ground to be fully and worthily examined—are the fitness of submarine mine defence for varying conditions, the validity of certain historical claims put forward on its behalf, the position of this branch of defence in relation to others, and the extent to which the system is applicable to the special requirements of the British Empire.

Such questions are naval in their very essence, and, doubtless on this account, the submarine mine systems of France, Germany, Italy, and Austria, are in the hands of the respective navies of these Powers. In Great Britain, Russia, and the United States,* on the other hand, the organization is military. Whatever may be the advantages or disadvantages of the two methods, it is at least incontestable that all the really important questions connected

* The United States have a system worked out, and a certain number of trained men; but up to the present time they have neither created an organization nor provided the necessary stores for defence on a large scale.

with submarine mines require expert naval knowledge at every stage of their solution, and that the fitness of this means of defence for special conditions, its proper standard as well as its limitations, can only be authoritatively laid down by naval men. Electrical science has nothing whatever to do with the matter.

The Chatham text-book of 1873—a confidential work which was immediately re-published in the United States—adopted a broadly comprehensive view of the realms of the submarine miner. Submarine mining defence is stated to be suitable for:—

a. First Class Fortresses	such	as		...	Portsmouth.
b. Mercantile Harbours	„	...		...	Liverpool.
c. Undefended	„	„	...	...	Belfast.
d. Small	„	„	...	...	Whitby.
e. Open towns	„	„	...	...	Brighton.
f. Open beaches	„	„	...	...	Sandown.

And further, (*g*) for intrenching a fleet against a stronger adversary. Moreover, (*h*) it is "especially adapted for the use of Colonial ports." In short, universal utility appears to be claimed for the system, since nothing is left except the open sea. Although the experience since gained as to the practical value of submarine mines is almost *nil*, more recent writers, such as Commander Sleeman * and Lieut.-Colonel Bucknill,† are more moderate in their claims.

Upon certain points the advocates of submarine mines are quite clear. The teaching of the American and of the Franco-German Wars constitutes—so they hold—proof positive of the peculiar value of their system. Again, it is cheap. Finally, the moral effect is enormous. All these things have been passed on from book to book and paper to paper, till they have grown into a parrot cry. Yet the first will not stand any examination whatever. The second depends wholly upon what is understood by a mine defence. The third is a matter of circumstance and opinion.

* "Torpedoes and Torpedo Warfare," 1880.
† "Submarine Mines and Torpedoes," 1889.

The material results achieved in the war of 1861–5 by very rough and really cheap apparatus were so considerable, that rash generalization, not unnaturally, followed. During this war, twenty-one vessels appear to have been sunk by submarine mines, and three others seriously injured. Even when the long period involved, and the large number of vessels employed is taken into full account, these results are necessarily striking, and undoubtedly testify to the practical efficiency of the submarine mine, in the peculiar circumstances in which it was called upon to play part.

The Confederate States had practically no sea-going navy, no commerce in the ordinary sense of the word, no distant possessions with which it was of vital importance to maintain communication. Provided only that blockade runners could make their way into some few of their ports, self-imposed obstructions of any kind and in any degree of profusion need not be excluded. It is surely desirable to remember at starting that, under no circumstances, could the conditions under which the Confederate States fought, apply to the British Empire. As to the question of the fitness of submarine mines for our needs, the American War can evidently teach us nothing. What may have been an admirable policy for the Confederate States might be fatal to Great Britain.

The great lesson of the American War—so we are told—is that guns unaided by obstructions cannot stop ships, and, as of all obstructions mines are held to interfere least with navigation, it follows as a corollary that mines are necessary for the defence of channels. In one form or another this proposition is copied from book to book, reappearing with wearisome punctuality whenever questions of defence are under consideration. An axiom cannot, however, be created by reiteration; and science repudiates formulas unsupported by reason. "It requires no argument to prove that four or five miles of channel thus obstructed (by submarine mines) will be no small obstacle to an advance, and if at the same time it be swept by a heavy fire of modern artillery and be covered by movable fish torpedoes . . . the city in rear

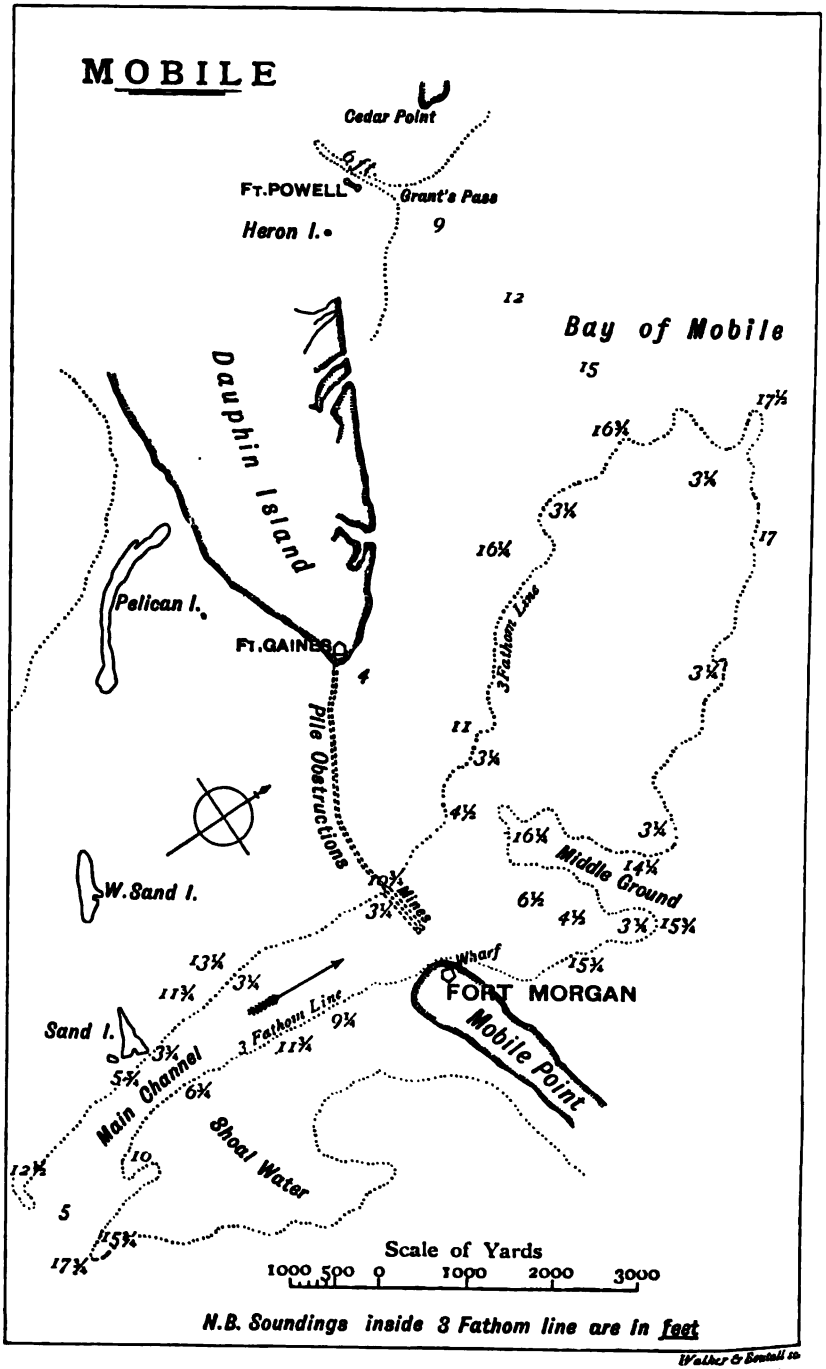
will be safe from insult."* Most willingly granted; but this tremendous sentence throws no real light whatever upon any question of defence.

The experience of the American War surely needs analysis before rash generalizations are propounded and offered to us as scientific truths. "The running past a battery is a very easy thing when there is a straight channel and sufficient depth of water," wrote Admiral Porter,† and these few words appear to be one of the bases upon which a vast structure has been built up. "A battery" is the term used—not several batteries, or dispersed and concealed guns, crossing their fire over a narrow channel, and yet able to concentrate their energy under the direction of a single will. Further, Admiral Porter demanded "a straight channel and sufficient depth of water." More, however, is implied. The obvious meaning is that ships which are to run easily past a battery, are to have clear water beyond them not under fire. Admiral Porter evidently had in view the Mississippi or Mobile Bay, and his words have no reference whatever to channels leading the ship only into cramped waters commanded by guns—no reference, therefore, to Plymouth, Harwich, Malta, Singapore, Mauritius, St. Lucia, and many other harbours that could be named.

Again, such waters as the Thames or Medway are clearly excluded, for the difficulties of navigation are considerable, and large vessels which have found it an "easy thing" to run past the immense defences near Gravesend will be effectually stopped by the river bottom—greatest of all obstructions—at Erith. Further, it is apparently forgotten that both combatants in the American Civil War built special ironclad navies for the river and coast work which largely entered into their operations, and that the armour of the vessels outmatched the available guns. A hostile Power may, of course, build a fleet of monitors or special vessels for the attack of our coast defences; but this could not be kept secret, and the flotilla when it leaves its

* Report of Committee of U.S. Board on Fortifications (1885).
† Report to Secretary of the Navy (1st February, 1865).

PLATE I.



Walker & Boutall sc.

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harbours can be dealt with by the British Navy. The whole question is, in fact, essentially naval, and can be studied only in connection with charts and diagrams of ships. It has nothing whatever to do with the Electrical Laboratory or the testing room.

Three instances drawn from the American War deserve mention, since it is important that their real significance should be understood.

1. *Mobile.*—The entrance to the lower Bay of Mobile was forced on August 5, 1864, by Admiral Farragut with four ironclads and fourteen steamers. This entrance was three-and-a-half miles broad between Fort Morgan and Fort Gaines (Plate I.).* Of this distance about two-thirds was obstructed by piles, as shown, the water being here so shallow that "only vessels of very light draught" could have passed it in any case. The obstruction was prolonged by three lines of contact mines; but between the mine field and Fort Morgan a gap of five hundred yards had been left for the use of the blockade runners. The *Tecumseh* was sunk by a mine; but the flagship *Hartford*, which then took the lead, "steamed through between the buoys where the torpedoes were supposed to have been sunk."† The inference drawn from this operation by Lieut.-Colonel von Scheliha is, that a "merely partial obstruction" is "not sufficient to enable forts to keep out a large fleet," and the experience of Mobile is assumed to justify the employment of mines in any degree of profusion and under all manner of circumstances. The inference, if limited to the Bay of Mobile and strictly analogous conditions, may be just; but it is of some importance that these conditions should not be forgotten. Fort Gaines was too far away to give any support, and the whole artillery defence fell upon Fort Morgan, an old hexagonal masonry work, which the Confederates had not been able for want of labour to improve materially. The guns were all‡

* Taken from "The Navy in the Civil War," by Commander A. T. Mahan, U.S.N., 1883.

† Rear-Admiral Farragut's Report.

‡ Except some ditch flanking guns in casemates.

mounted *en barbette*—in the old, not in the modern sense. There was a towering octagonal brick keep, whose walls were twenty feet from the gun rampart! Altogether Fort Morgan appears to have been as hopeless an artillery position* as can well be imagined, and such little power as it possessed was doubtless due to two extemporized batteries which had been formed in the covered way. Nevertheless, "not a single one of the guns in the Confederate batteries was silenced by the torrent of shrapnel shell and grape poured into them as each Federal vessel passed." †

The facts may be briefly summed. A strong fleet successfully passed a single obsolete fort placed on the end of an isolated spit. Once past this obsolete fort, the fleet found sufficient water—commanded by no shore gun—to carry on a little ramming action. Even so, Admiral Farragut did not attempt to engage the Fort again, and two Confederate gunboats, "*Morgan* and *Gaines*, succeeded in escaping under the protection of the guns of Fort Morgan." ‡ The operation appears to have been decidedly more difficult than might have been supposed, and no moral can be drawn which has the remotest bearing on the desirability of submarine mine defence for such harbours as Singapore, and such channels as the Thames, the Tyne, the Clyde, or the Mersey.

2. *New Orleans.*—On April 24, 1862, the entrance to the Mississippi below New Orleans was forced by Admiral Farragut with a squadron, of which the largest vessel—the *Pensacola*—registered 2158 tons, while seven vessels were gunboats of 507 tons. The river was defended by two forts—St. Philip and Jackson (Plate II.).§ The breadth of the Mississippi at this point was eight hundred yards. A strong line of obstruction had been formed "early in the

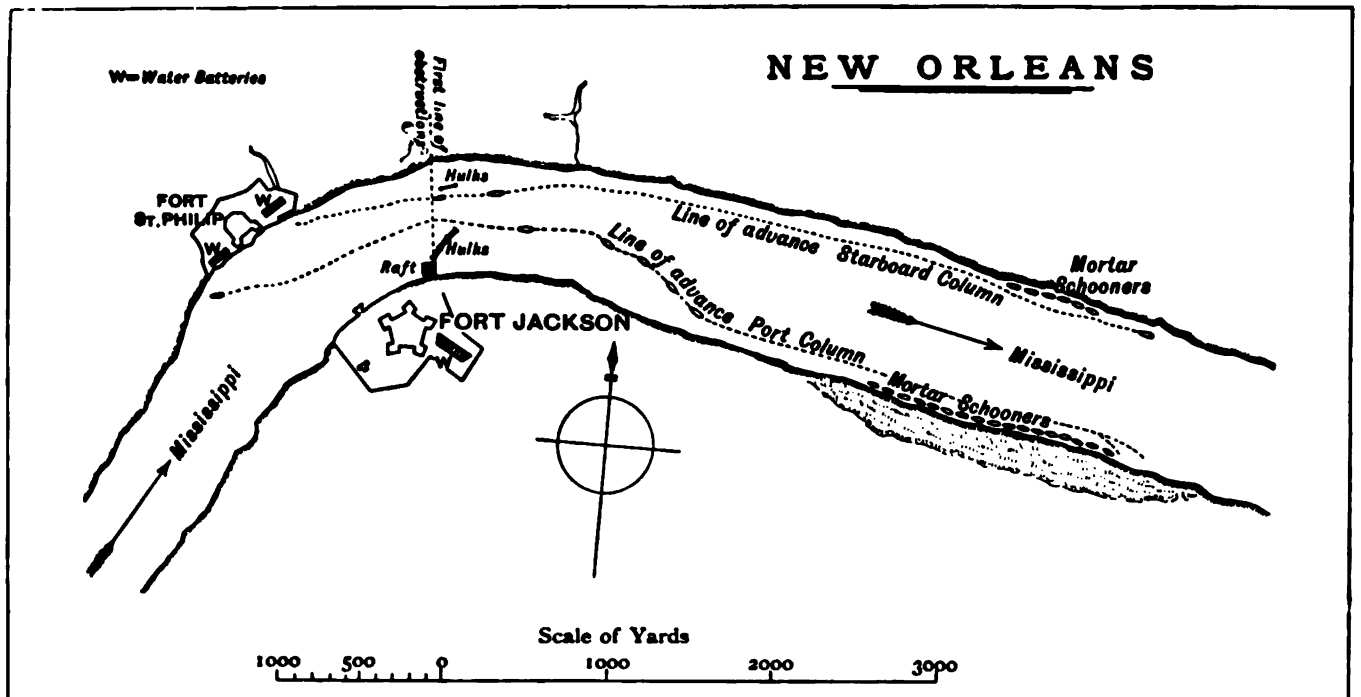
* Bombarded by the fleet and by shore batteries on August 22, Fort Morgan surrendered in a state of utter dilapidation the following day. Contrast this with Fort Wagner, which stood a siege of 58 days, with successive bombardments from land and sea.

† Von Scheliha.

‡ Rear-Admiral Farragut's Report.

§ Taken from "The Navy in the Civil War."

PLATE II.



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winter," consisting of two 2½-inch iron cables suspended from anchored logs; but this gave way on March 10, and was repaired by a line of anchored schooners, each of 200 tons, tied together by two or three one-inch chains. "The current and collisions with their own vessels had somewhat disarranged the apparatus." * A breach was effected in this obstruction on the nights of the 20th and 21st, through which the squadron passed in two divisions line ahead.†

The above is held up as "a proof that artillery fire alone will never again prevent a steam fleet from forcing a passage, the channel of which has not been obstructed." ‡ Such obstructions as those created by the Confederates being wholly inadmissible in the case of any frequented channel, the necessity for submarine mines is assumed to follow.

This, however, is not the whole of the story. The mouth of the Mississippi had been blockaded for months. On March 18, Admiral Porter arrived inside the bar with twenty mortar schooners—each carrying a 13-inch mortar—and six gunboats. A careful survey of the river was made, and by April 18, the mortar boats were all carefully placed in position behind "a thick forest of trees and matted vines." § A steady bombardment was opened, by which "the citadel and out-houses of Fort Jackson were set on fire," and the magazine was placed "in great danger; so that the enemy's fire ceased." ‖ The bombardment was continued for six days, with an average of between 1400 and 1500 shells per day, and the fire was maintained during the passage of Farragut's squadron which took place before daybreak on the 24th. Fort St. Philip received only occasional shells, and was little injured; but of Fort Jackson, Admiral Porter reported—"Never in my life did I witness such a scene of desolation and wreck."

Thus, in place of an easy rush of vessels past forts, the

* "The Navy in the Civil War."

† The intention was to pass the defences in single line ahead, but the port division being checked, diverged, and followed a line of its own.

‡ Von Scheliha. § Admiral Porter. ‖ Mahan.

operations were really of the nature of a protracted naval siege. Not only had a long blockade been maintained, but weeks of preparation and reconnaissance passed, followed by a six days' bombardment, which, under the circumstances, was probably as effective as if the mortars had been placed in batteries on shore. The difficulties of navigation appear to have been so small * that the squadron was able to move in darkness. Again, the forts were of medieval type, possessing only one rifled gun—7-in.—each, more than half the total armament being 24-prs. "The truth is that the Confederacy was very badly off for cannon." † Finally, it should never be forgotten that Farragut's object in entering the Mississippi was to join hands with a Northern Army. There is here no analogy whatever with the entry of vessels through a difficult channel into cramped waters.

Imagine the mouth of the Thames completely blockaded for months, and the reaches from Sheerness to Gravesend in full possession of a large hostile fleet for more than five weeks. Pendennis Castle—transferred from Falmouth to Gravesend—and Tilbury Fort, armed with smooth-bores and one 7-in. R.B.L. gun each, constitute the defences, which are heavily bombarded by a mortar flotilla for a week. Even then no argument in favour of inflicting mines on the waterway of the Thames can be drawn from the experience of the Mississippi. The conditions are not by any means parallel; since our enemy, once past Pendennis Castle and Tilbury Fort, is confronted with a narrow and difficult tidal channel, which only his light ships can use. Before Farragut rolled the mighty waters of the Mississippi, navigable, even by night, for his whole fleet for hundreds of miles, and bringing him into touch with a Northern Army. Finally, if the above conditions are ever fulfilled in the Thames, the British Empire will not be saved by submarine mines. Some caution is surely

* There were ten fathoms of water at the point where the obstruction was breached, and short of avoiding close proximity to the banks, there appear to have been no difficulties of navigation whatever.

† Mahan.

needed before making generalizations from unsuitable or irrelevant data.

3. *Vicksburg* was several times passed by the Federal squadron. Here also the operation consisted in moving for a time under fire with a view to reach free water beyond. Moreover, the Confederate artillery was weak and indifferently served, while only one bank of the river was held.

The general lessons of the American War are very simple:—(1) Obstruction of any imaginable density is permissible in the case of a Power possessing no commerce, and whose fighting navy is confined to a river flotilla. (2) Even unarmoured vessels can pass obsolete and badly mounted guns, provided that there is no difficulty of navigation, and that they have clear water ahead.

The Franco-German War provides another much vaunted historical plea for unlimited submarine mining. Yet the evidence, such as it is, points the other way, and in no case would it be permissible to draw inferences intended to guide the Imperial policy of Great Britain from this war. A navy, hopelessly over-matched, unable to keep the seas, scarcely permitted to show a ship out of harbour—these were the conditions under which Germany fought. On peril of national effacement, Great Britain must never fight under such conditions, and to borrow a policy from Prussia, in 1870, would be a confession of contemplated naval impotence. Such impotence meant to Prussia a mere pecuniary loss, to be presently recouped in the ransom of France. To Great Britain it would mean national ruin.

It is from the French side that we should naturally expect to gather evidence in support of the alleged deterrent effect of the mine. There is practically no such evidence. Unpreparedness for war, unsuitability of vessels and difficulties of navigation, are the full and sufficient reasons why the French navy was unable to take action against the North Sea and Baltic ports of Germany. "The northern fleet, being still composed, as in the early days of the expedition

of ships of heavy draft of water, the approach to the enemy's coast, studded with shoals, was for them impossible, and Vice-Admiral de Gueydon, in spite of his energy, had been obliged to content himself, as his predecessors, Vice-Admirals Fourrichon and Boüet-Willaumez, had done, in blockading Prussian ports." * "Before Kiel, without a disembarking force, without floating batteries, Admiral Boüet-Willaumez had nothing to expect from vigorous action." † The Admiral, in fact, held a council of war, at which it was decided, after much deliberation, that "without special vessels, without a disembarking force, any attempted attack, by the little effect which it must produce, would be of a nature to destroy all the prestige which still remains to the French squadron." ‡ The same writer states that on July 26th, the buoys and lights of the Jahde were still in position eight days after the entry of Prince Adalbert's squadron and no mines were down, while the defences of Wilhelmshaven were incomplete. Whatever may have been the chances of success against Kiel and Wilhelmshaven, had a blow been delivered within a few hours of the declaration of war by a specially prepared squadron ready for instant action, there were certainly none later on for such a fleet as the French employed—and this whether there were mines or not. The council summoned by Admiral Boüet-Willaumez of August 12, reviewed all the ports of the Prussian littoral, and unanimously came to the conclusion that Danzig and Colberg alone could be attacked, and that the effect produced even here would be small. As for the commercial ports Hamburg, Lubeck, Bremen, and Stettin, which it is commonly assumed were effectively defended by submarine mines, and the destruction of which "seemed so easy to the critics who, being on shore, occupied themselves with the affairs of the squadron," the reason

* Article in "Moniteur Universel de Tours," November 24, 1870, by Réne de Pont Jest, translated by Vice-Admiral Colomb.

† "L'Admiral Boüet-Willaumez et l'expedition dans la Baltique," Felix Julien, 1872.

‡ *Ibid.*

of their immunity appears to have been simple. "It was because these towns—these fantastic sailors did not know it, and no doubt ignored it—are at the end of shallow rivers, twelve or fifteen miles from the coast, where even in peace time, and with the most skilled pilots, the Prussian ironclads do not themselves enter." * The charts of this coast-line speak for themselves, and fully explain the difficulties which confronted the French squadron.

Of the two ports selected as the only possible objectives for the French fleet, Colberg had no mines, but was nevertheless left severely alone. On the other hand, "Admiral Boüet, being determined to examine Danzig Roads closely, pushed in there in spite of the mine-field which defended it, and had the daring to anchor there," but was unable to effect anything on account of the unfitness of his squadron, by which he was even prevented from capturing a little Prussian gun-boat which attacked the *Surveillante* on the night of August 30.

There is, in fact, no evidence whatever that mines played any part in securing the ports of the North Sea and Baltic. At any rate, the immunity of these ports is amply accounted for on other grounds.

It would, however, be unjust to say that mines failed to give evidence of their existence in this war. M. René de Pont Jest states that the German merchant vessels which ran for the mouths of the Elbe and Weser, in attempting "to get into the river or into the bays, ran upon the submarine mines which had been submerged for our benefit, and sank under the eyes of those for whom the engineers of King William had reserved this sort of death." This may be a picturesque exaggeration; but it seems certain that, owing to the blocking of the ports, a large number of trading vessels were caught. "More than thirty ships certainly had been captured or lost . . . and it is not exaggerating to estimate the German losses by the blockade since the end of July at five millions of francs a

* René de Pont Jest, November 28, 1870.

day." * As might have been expected, the vessels appear to have been uniformly caught in attempting to enter their own ports by night. Finally, it is certain that several Germans were killed in subsequently raising their mines. On the whole, it seems clear that Prussia would, under the circumstances, have saved herself loss, by omitting to lay out her mine-fields.

Whatever opinions may be held as to the value of the Prussian submarine mine defence in 1870, it will probably be admitted that France might have been content to dispense with the aid of this doubtful ally. Her ports, at least, were in no danger whatever, and the spectacle of the French spending three months in laying down mines at Toulon, and apparently failing to complete the mine-fields at Cherbourg, is not edifying. At a time of dire national need, was no better work to be done than the obstruction of French harbours in fear of an enemy who could not even look at them? † Will a single mine be permitted to be laid down in the British Empire in the event of war with Germany?

The lessons of the Franco-German War stand out in clear relief, but none of them point in the direction of submarine mines. Ports, like London and Glasgow, lying far up narrow tidal channels, can only be approached at all tides by comparatively small vessels of the cruiser type, which could not live under the fire of field guns. Large vessels will certainly not venture into cramped tidal channels where their retreat would not be secure, and they would run every chance of grounding, apart from the risk of being caught in a trap by a force entering the river behind them. Fortified ports can only be effectively attacked by large special flotillas, such as those constructed in the American Civil War, and, except in good weather, such a flotilla would find many difficulties in northern waters. Further,

* De Pont Jest. Another French writer, Félix Julien, estimates the German loss during the war at three millions of francs per day.

† Meanwhile, a brig, a barque, and a steamer were picked up by a German vessel off Point de Coubre, near the mouth of the Gironde.

an attack, to have any real prospect of success, must be supported by a land force. Finally, defended ports cannot be seriously attacked at all, and no blockade can be established except by a Power possessing a great naval preponderance.

Another curious historic fallacy remains to be dealt with. "In the war which was carried on for six years by the Empire of Brazil and the Republic of Paraguay, the latter managed, by means of submarine mines, to keep at bay for the whole period the Brazilian fleet of fifteen ironclads and sixty other men-of-war." So states a distinguished advocate of submarine mines, who, at the same time—and quite as accurately—takes occasion to observe that "it is well known that the French naval supremacy was paralyzed during the Franco-German War by the existence, or reported existence, of mines in the Elbe."* Few, probably, have ever taken the trouble to wade through any account of the confused scrambling which occurred between the Allies and Paraguay, and the fearless statement above quoted appears to have escaped criticism. As a matter of fact, it is altogether incorrect. The Paraguayan mines are credited with the destruction of one Brazilian vessel, the *Rio de Janeiro*. "Les terribles torpilles . . . ont rempli une seule fois leur office," states one writer.† Another writer,‡ dealing with the matter from the submarine mine point of view, describes the vessel, a river monitor drawing nine feet of water, as "un magnifique cuirassé," and, in order to aid the imagination, provides a striking picture of the scene, utilizing a first-class battle-ship for the purpose! A third writer,§ however, who was practically Commanding Engineer at the time to the Paraguayan army, and who must apparently have heard of this triumph of his adopted country, makes no mention of it whatever, although he

* How the existence of mines at the mouth of a single river could in any case "paralyze" a nation's navy does not appear.

† Théodor Fix, capitaine d'état major. Conference de Ministére de la Guerre.

‡ "Les torpilles." Lieut.-Colonel Hennebert, 1884.

§ "The War in Paraguay." G. Thompson, C.E. (1869).

alludes to the explosion of fifteen hundred pounds of powder floated down among the Brazilian vessels, by which no damage appears to have been effected.

The Brazilian fleet moved without any difficulty whenever the Admiral was able to make up his mind. After leaving Buenos Ayres, "it took just a year to reach the nearest point of Paraguay," and the subsequent proceedings of the squadron, when at length it succeeded in reaching the enemy's waters, were characterized by similar deliberation. The action of the navy began with the little affair of Riachuelo, where the Brazilian vessels, during their engagement with a few small armed river steamers of the Paraguayans, were fired at by some field guns on the bank. This seems to have inspired a wholesome dread of shore guns, which proved persistent. On May 20, 1867, eight months after the reported date of the destruction of the *Rio de Janeiro*, the Brazilian Admiral reconnoitred Curopayty, and finding a few empty demi-johns, he excused himself for doing nothing for three months—this, possibly, is one of the bases of the kept-at-bay-for-the-whole-period story. By August 15, however, he had hardened his heart, and the flotilla passed the Paraguayan battery. "The passage of Curopayty by the fleet had the effect of making the Paraguayans see they could do nothing against ironclads with their small artillery." * Having accomplished so much, and proved that the submarine mine scare was capable of alleviation, five ironclads anchored off Humaitá, and bombarded the church intermittently from August, 1867, to February, 1868, "displacing some bricks and cutting one or two beams in half." † Three new monitors having arrived on February 13, the fleet passed Humaitá on the 15th without any difficulty.

In fact, so far from the Paraguayans being able "by means of submarine mines to keep at bay for the whole period the Brazilian fleet," that fleet was able to move about whenever and wherever its Admirals chose, hindered only by batteries on shore and by some rude extemporized gun

* "The War in Paraguay." † Ibid.

flats. Mines played no part whatever in this war, and, even had it been otherwise, Great Britain might as rationally look to Switzerland for the inspiration of her naval policy, as draw a lesson from the proceedings of the semi-civilized inland State of Paraguay. As a primary qualification for forming a sound opinion of the war value of submarine mines, it is necessary to attain to a conception of the British Empire.

In 1866, the Austrians employed mines for the defence of Pola and Venice, yet the ancient fortifications of Lissa, armed with smooth-bore guns and unaided by any mines, repulsed a two-days' attack by fifteen Italian vessels, containing "in their armament all the latest improvements which the modern art of war had up to that date invented," * and the naval action which followed sufficed to secure the safety of every Austrian port.

On October 10, 1877, a Turkish gunboat, the *Suna*, was sunk in the Sulina arm of the Danube. The Turks had intrenched themselves behind a line of obstructions and mines, outside of which the Russians laid a second line of electro-mechanical mines, one of which was struck by the *Suna* in moving up stream to engage the *Opyt*. This was the only result obtained during the war, and the immunity of the ports of both belligerents is amply accounted for on grounds with which submarine mines have nothing to do.

In the war of 1879–81 on the Pacific Coast of South America, submarine mines played no part. "The Peruvians probably did lay down a few torpedoes, but they were placed close to the shore," † and in any case it is not easy to see how mines could have materially affected the operations.‡

In 1884, the French squadron lay at anchor off Pagoda Point inside the defences of the Min River for more than

* M. Buloz. "Revue des deux mondes." July 20, 1866.

† Papers issued by the U.S. Intelligence Department.

‡ One vessel was sunk, however, and another much injured by drifting boats prepared with explosives and incautiously taken alongside by the Peruvians.

a month making preparations for hostilities. The position was twenty-five miles from the sea, and there were no defences on shore except "two old stone forts and a field battery."* Coming down the river after the bombardment of September 23, Admiral Courbet seems to have feared that mines had been laid behind him in the Kimpai Pass—"from various sources I had reason to fear the presence of torpedoes." Accordingly, on "the nights of the 28th and 29th our boats dragged the channel, finding nothing." "The new buoys seemed to be fishermen's, and the dragging gave no cause to suspect torpedoes." The "moral effect" of the supposed existence of submarine mines was, therefore, limited in this case. Two nights of work were entailed on some of the boats of the French squadron.

At Tamsui, Admiral Lespes reported that the river was "obstructed by four large junks loaded with stones and sunk. . . . A line of sixteen ground mines is easily observed." Admiral Lespes had only one gunboat in his squadron, and it was physically impossible for him to enter the river; but the mines are, notwithstanding, credited with his exclusion. After some days of reconnoitring, a force of five hundred and forty men were landed, only to be repulsed by the Chinese with a loss of more than twenty-one per cent. of the strength engaged.

Even if every advantage claimed for submarine mines exists, no war experience at present indicates their universal suitability for the needs of Great Britain. It is somewhat remarkable that, as a nation, we appear to have been chary in adopting an arm which now threatens to be regarded as of general application. Lord St. Vincent is stated to have held that "Pitt was a fool for encouraging a mode of warfare which, if successful, would wrest the trident from those who then claimed to bear it." This opinion probably survived to a later date, and the formation of a "Floating Obstructions Committee," in 1863, appears to have been the original bacillus from which an epidemic has sprung.

* Papers issued by the U.S. Intelligence Department.

Submarine mines may be divided into three categories—

(*a*) Mines which depend for their chances of successful employment on accurate observation of two kinds—first, when the mine itself is being laid out; second, when following the ship which it is proposed to destroy.

(*b*) Controlled electro-contact mines which depend for their action on contact with a vessel, the firing being effected through the medium of a circuit closer in the mine itself.

(*c*) Uncontrolled mines, mechanical, electro-mechanical, or chemical, which are exploded when struck with adequate force by friend or foe.

As to the relative merits of (*a*) and (*b*) the experts seem to differ; since Colonel Bucknill states "contact mines are the general favourites;" but "the preference . . . is not easily accounted for." * After remarking, however, that "it is not prudent to rely upon observation firing at greater distances than one sea mile, the smoke of an engagement, or fog, or thick weather, having to be reckoned with," he lays down an ideal defence for Cherbourg, in which some of the observation mines are thirteen thousand yards from the observing station.

Putting aside all questions of higher policy for the moment, the following conclusions appear to be inevitable.

Observation mines, lying on the bottom or anchored at depths greater than a ship's draught, can be employed without hindrance to traffic; but their real efficacy in war is somewhat problematic, which, doubtless, accounts for their rejection by Germany and the United States. Under exceptionally favourable circumstances, where there is no great rise and fall of tide, where sufficient height exists for the employment of a depression position-finder, and where good weather can be secured for laying them, they *may* prove effective by day. Such efficiency will, however, ultimately depend on the nerve and coolness of a single individual, who cannot be previously practised in his *rôle*, and who would, at the critical moment, find himself

* "Submarine Mines and Torpedoes."

saddled with a great and unaccustomed responsibility. By night the value of observation mines becomes doubtful. If electric lights are provided, observation firing is, perhaps, practicable; but if such lights are permitted to rove they will most seriously interfere with those required for artillery purposes. It appears, in fact, altogether impossible to employ two sets of search lights in charge of different arms with different objects. In thick weather observation mines are useless.

Contact mines, so long as the system adopted is simple and workable — not in short peace experiments, but throughout long months of war — should be effective. They admit of more rough-and-ready laying out than observation mines, and are not so dependent upon good weather in the first instance, though much more liable to disturbance, due to bad weather, when laid. They may be claimed as efficient by night or in a fog. On the other hand, there is no experience to show whether they could be employed in a channel where there is heavy traffic, and, without this experience, it is impossible to admit their general suitability to the needs of the British Empire. If set to act automatically by night, or in thick weather, they are equally dangerous to friend and foe. Whether, when not rendered active, they would be fired if cut through by a ship's screw blades, is not known.

Uncontrolled mines, in the case of almost every fortified harbour of the Empire, are barred by the elementary principles of national policy. The Germans, who make simplicity and fitness for the rough ordeal of war their sole ideal, have apparently adopted this class of mine only, thus frankly abandoning the use of their commercial ports during war. This policy may be wise* — for Germany; for Great Britain, it would be suicidal.

* The writer does not, however, admit the wisdom of this policy for a moment, strongly holding that all the war experience of the past clearly shows that the present defences of the German ports—mines apart—are more than sufficient for security, and that those ports are unassailable without the co-operation of a large force on shore, the action of which would be unaffected by any number of mines.

Summing up, therefore, observation mines, placed at an adequate depth, are unobjectionable from the point of view of navigation. In their case, the question is mainly one of requirement, of efficiency under a variety of conditions, and of reasonable economy. Is the channel to be defended one which such vessels as we must prepare to resist would ever attempt to enter; or, in other words, are mines required at all? What is the minimum defence necessary to prevent such an attempt? Do the local conditions permit the probability of the successful operation of observation mines? In the case of electro-contact mines, a further question arises—for Great Britain—as to whether they can be employed without entailing any hindrance, delay or danger to navigation at a time when the quick entry of vessels into port is essential—whether, in fact, the "friendly channel" can be practically and safely worked. The latter question can be answered only after careful experiments, not yet carried out. All these questions are naval in their very essence, and require, as the prime qualification for discussion, a thorough grasp of the principles of Imperial defence. Not till they have been exhaustively answered do the functions of the expert electrician begin. On the answers depends the only practicable basis for submarine mines.

In proposing an elaborate defence for New York Harbour, Colonel Bucknill bases his plea upon the ease with which a hostile force could be landed on Long Island. It does not appear to have occurred to him that the United States could, without any difficulty, place twenty thousand men on Long Island before any Power in the world could land two thousand men there, and that, but for the absurdity of the measure, they could raise the number tenfold without excessive effort. Take away the major premiss, and the whole elaborate structure, with all its charming electrical possibilities, dissolves "like the baseless fabric of a vision."

Whether the experts place complete trust in the efficacy of the great systems they have elaborated cannot be

stated; but there are signs, in the remarkable multiplication of new demands, that their belief is not deeply rooted.

Very rough extemporized appliances proved efficacious in the American War—that is to say, in the hands of a Power which possessed no sea-going navy. Submarine mines have practically achieved nothing in any other war. With the exception of the countermining drill occasionally practised by the British Navy, no means of neutralizing submarine mines has been devised which was not tried in America;* and this drill—for its practical application—requires a special equipment and careful special preparation in sheltered waters, is obviously impossible under fire,† and has never been adopted by any foreign navy. Nevertheless, the submarine mines of the first naval Power in the world, even when superimposed upon an artillery defence capable of standing alone, are not considered to be efficiently guarded. You must, in fact, add to your works and armaments in order to protect your submarine mines, notwithstanding that countermining, except when blank cartridge is employed, is out of the question.

Here are a few of the requirements of the perfected submarine mines of to-day. "The defence must be well supplied with powerful electric lights." "Smokeless powder should be used." Special additional works of special design are required for the defence of the mine-fields, perhaps even special guns firing special high

* The possibilities of the dynamite gun in this respect have yet to be demonstrated.

† On this point it is happily possible to refer to experiment. A 42-foot launch, equipped for countermining, was fired at by one 6-pr. Q.F. gun and one 4-barrel Nordenfelt for four-and-a-half minutes at ranges of 1000 to 1500 yards, receiving altogether 65 hits, of which the countermines received 13, while the cable was cut in 27 places. In a second experiment of the same duration, 310 rounds were fired from Martini-Henry rifles, at 500 yards, giving 93 hits, of which the countermines received 21, and the cable was cut in nine places, and injured in 28 places. In both cases the whole equipment was, therefore, wrecked, and the countermines would, doubtless, have been exploded, sending the launch to the bottom.

explosive shell. If the mined waters lie at the most moderate distance from the shore, "quick-firing guns should be mounted on a number of small steamers." A special naval force is, in fact, required in addition to special works and armaments on shore, merely to guard these guardians. All these things, however, appear to avail nothing if the enemy should find out where the mines are, for we are solemnly assured that "secrecy is . . . essential." *

The great advance in electrical science since the American War must apparently have merely rendered submarine mines helpless to a degree which their rough, simple, and cheap forerunners did not manifest. The adjunct of defence which proved useful to the Confederates—under the peculiar conditions with which they had to deal—is now a veritable octopus, with tentacles all pervading. The best known instance of a fleet being stopped by mines and obstructions occurred in 1863 at Charleston, where none of the requirements, now viewed as essential, ever existed; but Charleston in 1776, unprovided with either mines or obstructions, succeeded in repulsing Sir Peter Parker's squadron.

If the existence of a mine-field were regarded as justifying any diminution of the defences of a port, concessions to its multifarious demands might perhaps be made; but the Text-book of 1873 is explicit on this point. "The use of submarine mines does not in any way enable us to dispense with guns and batteries; these are as necessary, if not more so, than ever." The same work, however, points out that "a channel a hundred yards wide might in this way—by submarine mines—be defended at a cost not exceeding that incurred in the purchase of half a dozen heavy rifled guns." To defend a channel a hundred yards wide is not a great achievement at any time; but as the half-dozen, or other number of guns would have to be provided in any case, the question of relative cost does not arise.

* "Submarine Mines and Torpedoes."

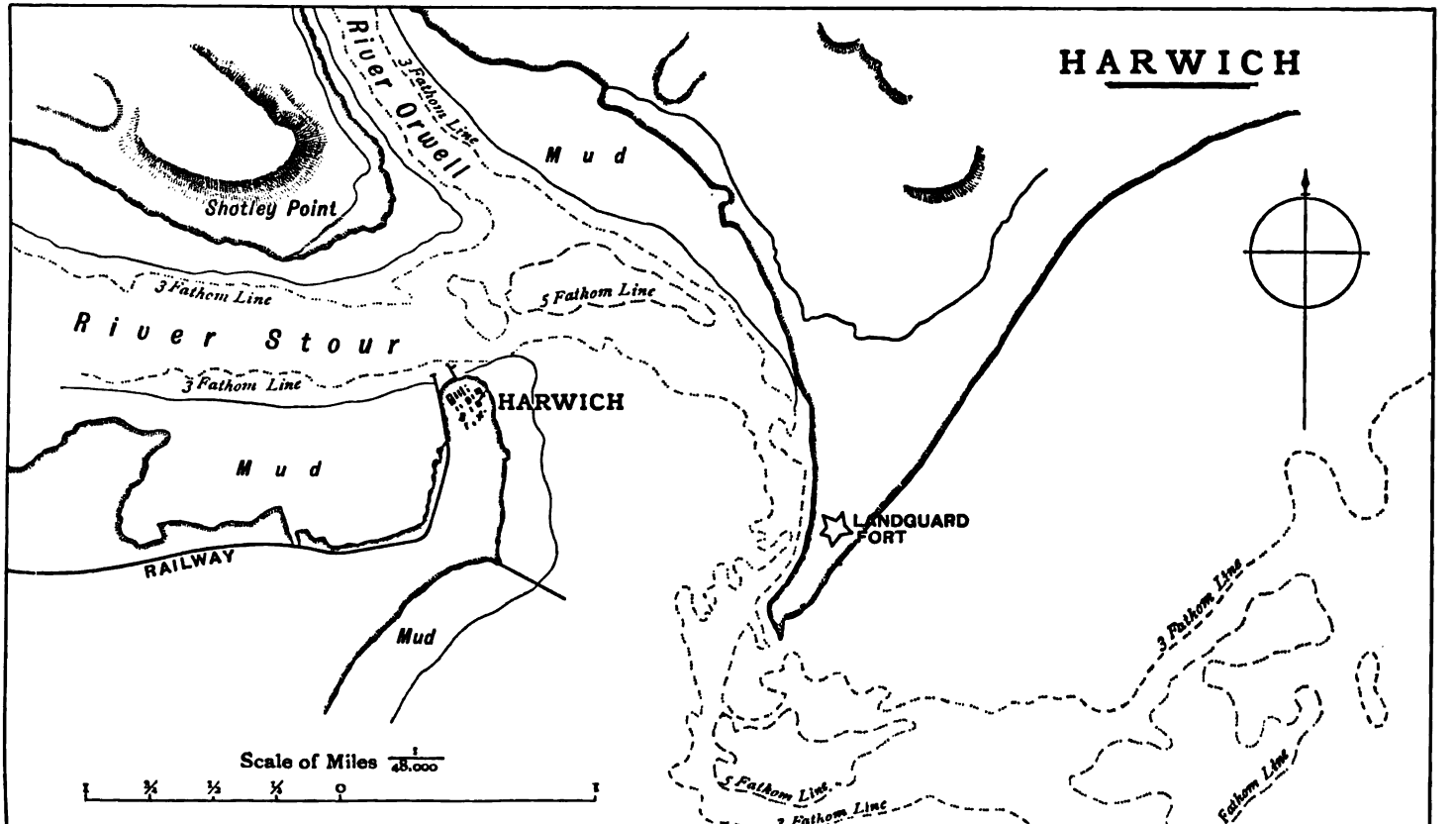
Guns are required to keep an enemy's ships at a distance and to prevent bombardments of dockyards, towns, and shipping. Their number and power is thus determined by considerations with which mines have nothing to do. There is no comparison between a weapon which is always ready for action as soon as men can be placed alongside of it, and one which may—as at Toulon in 1870—require three months of preparation, which demands, in most cases, fair weather for its installation, and which in the last resort depends for success on the fortunate absence of "that little something which so often causes a failure in this mode of warfare." *

It is exceedingly difficult to ascertain what the cost of a mine-field really is. At Spezzia, for example, the stores, boats, buildings, etc., might be appraised and balanced against a certain number of guns; but the capitalized cost of the fifteen hundred trained men whom the Italians consider necessary in order to be able to put their mines down with sufficient despatch would have to be taken into account in the calculation. † About sixty of the heaviest guns necessary for coast defence could be worked with half this number of men. We cannot compare cost without a common denominator. If, for example, the total personnel at any station were such that three weeks would be required to lay the mine-field, no comparison can be instituted with another arm ready for use on the first day. We may perhaps compare the cost and scope of action of a gun with that of a Brennan installation—at least when the latter has steam up—but we cannot possibly compare a gun in battery with any number of mines in store. Assuming parity of readiness, however, there is one case in which a common denominator may, perhaps, be found. If, at any such harbour as Singapore, it was proposed to mount a

* "Torpedoes and Torpedo Warfare."

† Here, however, arises one distinct advantage in employing sailors. When once the mines are down a comparatively small number of men ought to be able to keep them in order, and operate them in case of need. The sailor, having laid his mine, is available to take his natural place on board ship.

PLATE III.



Walker & Boutall sc.

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few special guns commanding the inner waters, the cost of these guns might be compared with that of the mine-fields, whose place they would fill with equal efficiency and without objection. In this case, the balance of economical advantage would certainly not be on the side of the mines unless an extremely modest standard of requirement were adopted.

In deciding whether a mine defence is suitable in a given case, the first considerations are the conditions which the defence, as a whole, is intended to fulfil, and the nature of the operations practicable to an enemy. At Harwich (Plate III.), for example, the sole conditions are the denial of the harbour to an enemy, and its free use without delay or hindrance by British vessels of all kinds. There is nothing to bombard, since if bombardment becomes a feature in future naval war, as certain French writers would have us believe, such towns as Brighton, Hastings, or Torquay, would obviously be selected in preference to places like Harwich. Bombardment is, however, humanitarian considerations apart, scarcely a suitable policy, except for a dominant naval power, as tenfold reprisals would be taken—and justified.

All necessary conditions of defence at Harwich will, therefore, be fulfilled by a strong occupation of Shotley Point. Guns well posted here can easily deny the use of the harbour to hostile vessels, and to engage such vessels in these cramped waters is precisely what the artilleryman would most desire.* The Shotley Point position is so far (6400 yards) from deep water outside that its armament could not possibly be injured by vessels able to manœuvre without constraint. The guns at Shotley Point can effectually prevent a landing inside the harbour; and, if a land attack were undertaken, as all the experience of

* England owes much to Queen Elizabeth's reign; but for modern purposes, we could well have dispensed with Landguard Fort. It has been pointed out by American writers that Fort Fisher would never have been taken, if it had not been placed in the wrong position. The case of Landguard Fort is somewhat similar, and its attempted rehabilitation, at great expense, has not been successful.

the American War shows to be necessary in dealing effectively with coast defences, mines would not affect the success or failure which would determine the possession of the harbour.

Port Louis, Mauritius (Plate IV.), is another case of the same kind, except that the waters are even more cramped, and a ship once inside is at the mercy of any gun that bears upon her. Moreover, if there were any real danger of a vessel running into such a trap, a single 6-in. gun mounted on Signal Mount, at a height of 1060 feet, would dominate the whole of the little harbour at a range of less than 2500 yards, and render it untenable. The Grand and Quarantine harbours at Malta, Port Castries (St. Lucia), and Esquimalt, are similar cases, and many others might be mentioned. No vessel would ever attempt to enter such ports if the inner waters were commanded by guns.

It may be laid down, therefore, as a general rule, that mines are not required where it is necessary to deny cramped waters, capable of being commanded by guns, to an enemy. The guns will usually be the most economical defence; they will have a far wider sphere of action than the mines; they will give rise to no possible hindrance or delay to the entrance of friendly vessels. If arranged for high angle fire, they will, in many cases, be at the same time available to aid the defence of the outer waters. If, as can rarely be the case, there are no suitable positions for guns bearing on the inner waters of a harbour, it may be desirable to fall back upon mines.

In such cases as Plymouth and Singapore (Plate V.), where the port to be defended has two entrances, the one least suitable for traffic may, if it is so desired, be barred by submarine mines without positive disadvantage; but as excellent artillery positions exist in both these cases, nothing would better suit the purpose of the defence than the entry of one or two vessels which may have succeeded in running the gauntlet of the artillery in first line. If Farragut, after passing Fort Morgan, had found himself in such cramped waters as those of Plymouth Sound fully

PLATE IV.

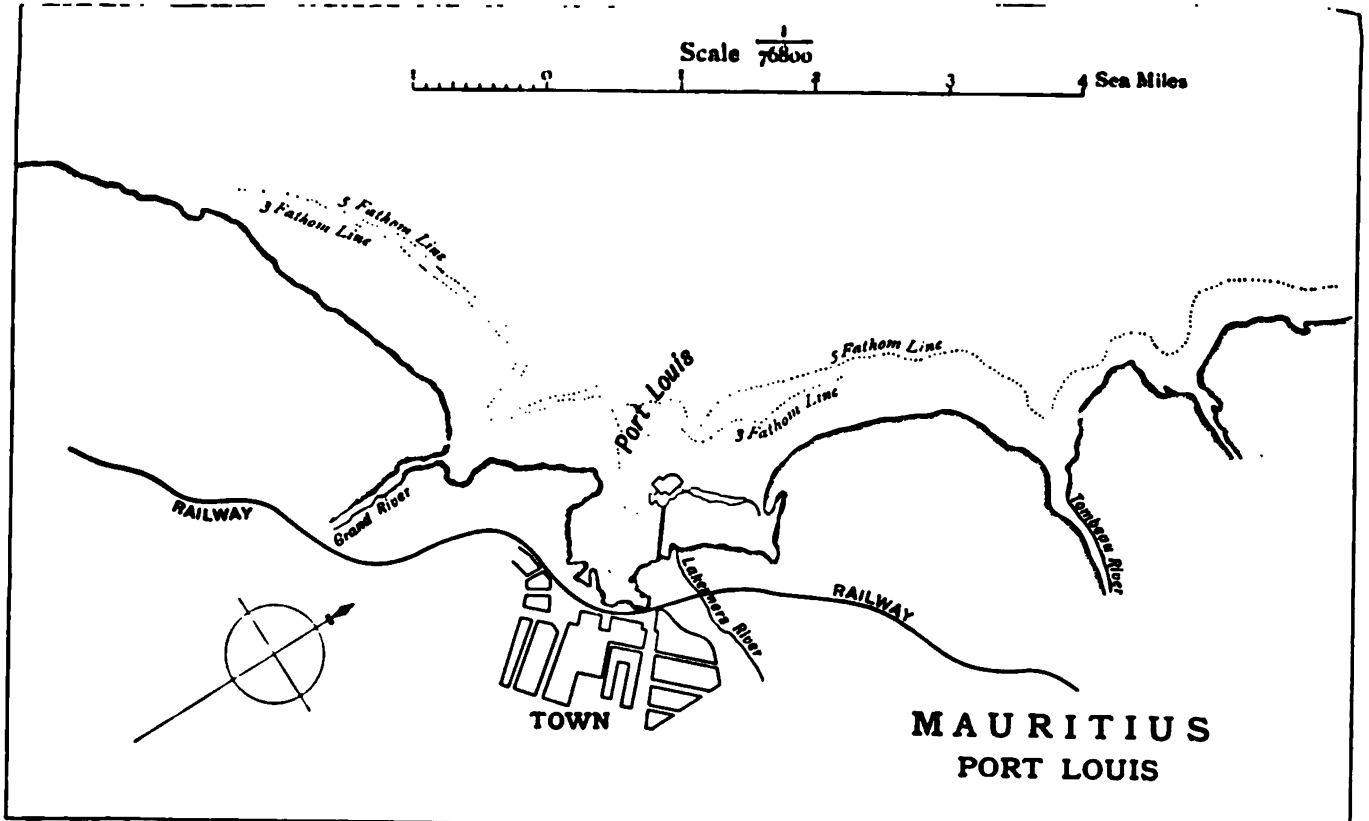

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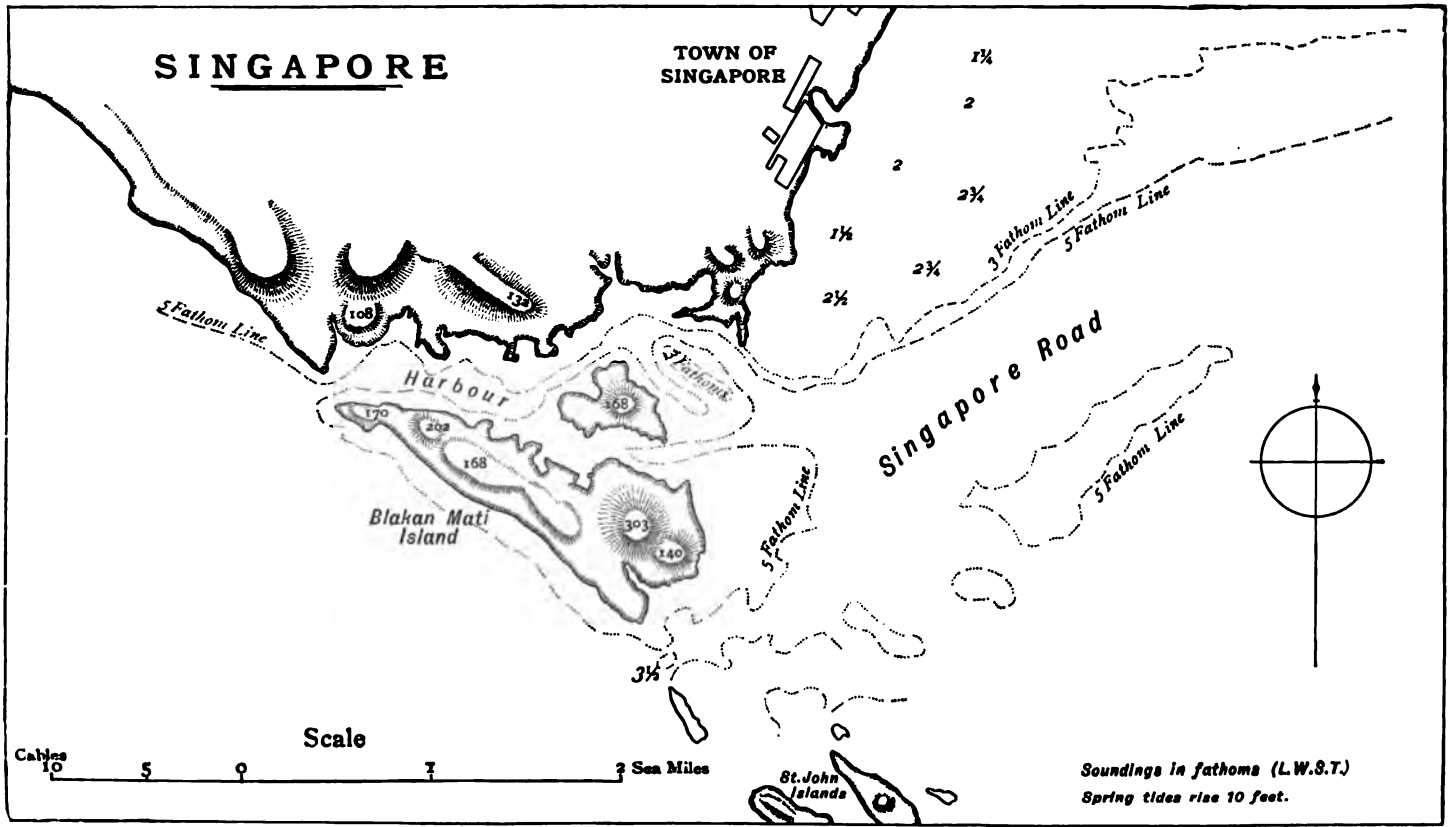
PLATE V.



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commanded by guns in positions such as Staddon Heights and Drake's Island, he would have been destroyed, and Mobile would have been treated as an object lesson of another kind.

Where an easy channel of approach leads into free waters, the possession of which by an enemy's vessels would confer a definite advantage upon them, the claims of submarine mines are of a different kind. In such a case—rare in the British Empire—it may be contended that vessels will be able to run past shore guns, trusting to speed, bad light, smoke, or the armour protection of which the modern ship has generally but little. The first question here is what nature of vessels could reasonably be expected to be employed in the venture. Almost the whole of the cruiser class is constitutionally incapable of facing moderate defences on shore, since the crews are practically in the open, with the drawbacks of a bursting screen in front of them, and of offering a perfect target, which there could be no excuse for missing at medium ranges. This fact is, however, dimly realized at present, and the term "iron-clad" is frequently applied in the loosest fashion to any iron or steel vessel.

The distance of the probable attacking squadron from its base would be another factor of importance, since it is clear that, in view of the terrible damage which modern shell can inflict, there will be little eagerness to wilfully expose ships to the chance of being rendered unseaworthy after two or three hits, when their nearest place of repair may be thousands of miles distant across storm-swept seas. It is not the wretched guns of the Confederates or the Paraguayans which would have to be faced to-day.

While, therefore, it may well be doubted whether any mines are required for the ports of Australasia, which, if they possess effective artillery defence, will never be attacked, such cases as Halifax, Kingston Harbour (Jamaica), Hong Kong, and the Firth of Forth may seem to come within the legitimate domain of the submarine miner.

What class of vessels is it necessary to be prepared against at Halifax? Can such vessels enter by night or in weather so thick that the shore guns could not be used against them? Would a night attack offer any possible attraction to an enemy where well placed electric lights exist? Can ships enter at speed, if the ordinary buoys are removed or changed in position? These are purely naval questions which can be dealt with only by naval experts having local knowledge. When they have been authoritatively answered, a basis may be found on which to rest submarine mine defence.

At Kingston, Jamaica, the single entrance channel is only one hundred and eighty yards wide. A few observation mines here would amply suffice to deny the passage and be open to no objection.

At Hong Kong the interior waters can be commanded by guns in very advantageous positions; but the ranges are long, and an enemy's vessel, if recklessly handled, might be able in a short time to inflict much damage among the shipping probably crowded there in time of war. Mines, by their moral effect, might succeed in minimizing the chances of such an exploit. The most necessary condition at Hong Kong is, however, that Her Majesty's ships, and all British vessels whatever, may be able to enter the port, by day or night, with the least possible delay. If it cannot be shown that this condition is fully compatible with the employment of mines, the case for the latter ceases to exist. Whatever may be the arrangements laid down in peace, it is certain that in the event of war with a naval Power, the naval Commander-in-Chief in China would not permit any serious restrictions upon entry into his base.

The Firth of Forth offers conditions extremely unfavourable to mines, unless the contact class is employed on a large scale. But in this case, to be really effective as a defence, they must be always ready for action in the thick weather which frequently occurs on this part of the coast. Who would accept the risk of such a state of things, considering that for one cruiser of an enemy making for

Leith Roads, there will be hundreds of British vessels wanting to enter, and liable to be caught outside if compelled to wait till the weather clears? What system of patrol would satisfactorily meet the difficulty? In any case, mines cannot prevent shells being fired into Edinburgh from the outside waters, although the only real result an enemy would thus obtain would be a great impetus to the local volunteers. To protect the inner waters, a few 6-in. guns and two or three small groups of high angle fire guns would amply suffice. Few so-called "ironclads," and no cruisers, would face them.

A further case for consideration arises in the defence of ports lying far up long channels of approach. Here, again, only naval opinions are of value. The main questions are, would an enemy's vessel venture into these traps, and what could she do when she got there? The Thames and Medway lie still under the ban of de Ruyter, and the popular ideas as to their necessary defence may, to a greater extent than is generally believed, be traced to a Dutch origin. The naval conditions which completely explain this disgraceful chapter of history are commonly forgotten altogether, although Pepys has defined them in a sentence—"in wisdom, courage, force, knowledge of our own streams, and success, the Dutch have the best of us."

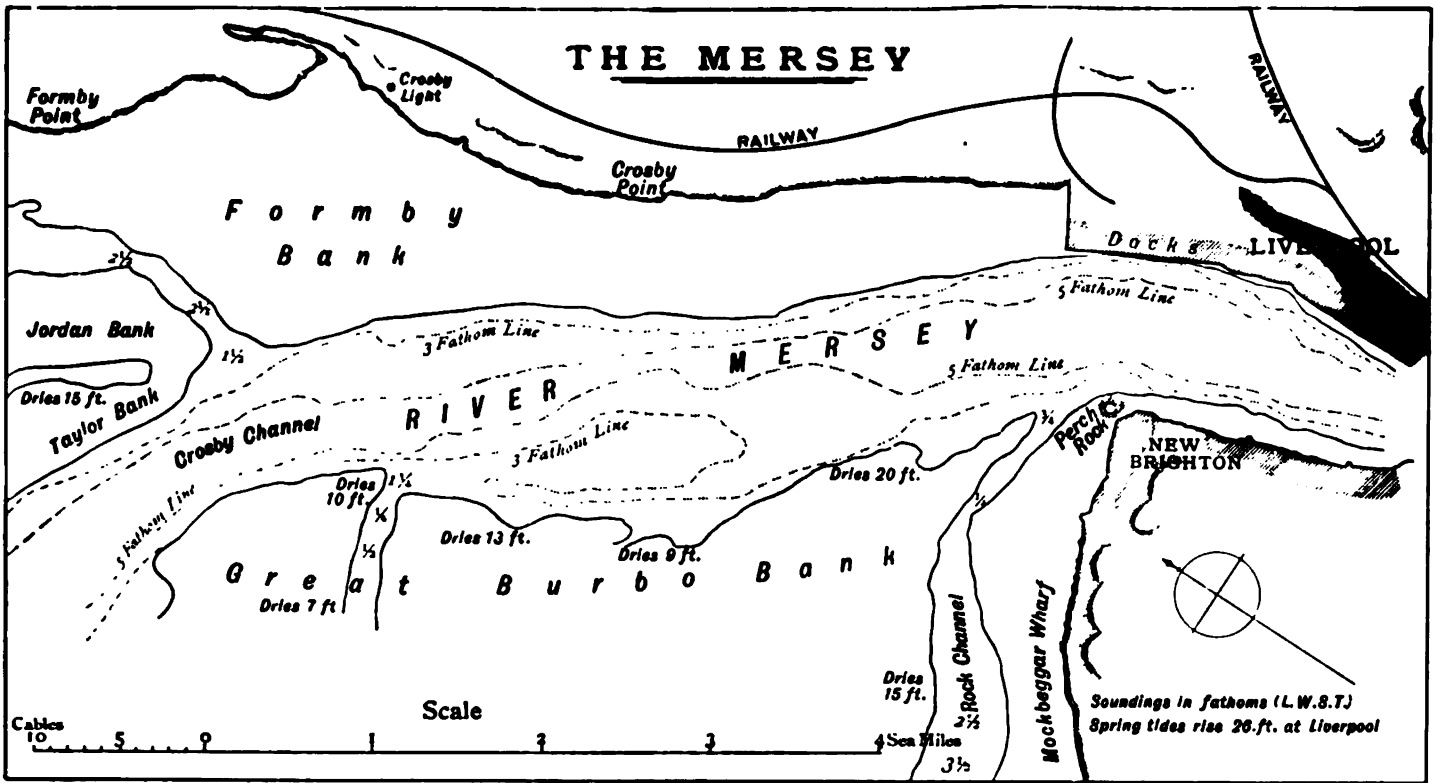
The last place selected by an enemy for his operations would, however, be such channels as the Thames, the Medway, and the Clyde*—at least until the British Navy is effaced, and in this case, an enemy's squadron would be accompanied by a large force operating on shore. Unless this force could be defeated in the field, the Thames defences would quickly fall, and with the possession of the river banks by an enemy all possibility of utilizing mines must end. Financial considerations apart, there is, however, no practical objection to the employment of mines in these cases, provided that the traffic is not impeded. They will

* It is extremely unfortunate that, for reasons which cannot be here investigated, the lessons of the naval manœuvres of 1888 and 1889 should have been popularly read in an opposite sense.

never be required, since the real danger to British interests lies outside these channels, and can be met solely by naval means; but, on the condition above laid down, they will be unobjectionable, and, though not required for their "moral effect" upon an enemy, they may have a moral effect in the sense of security possibly conveyed to uninstructed persons at home.

The Mersey (Plate VI.) offers, perhaps, a special case, but is specially unfavourable to mine defence. It is obviously useless to employ mines to close the mouth of the river at *A*, for a vessel which has penetrated thus far could, with her long range guns, inflict just as much damage as if she went further up the river, and with less risk of being caught. There is, in fact, no inducement to proceed further. Moreover, guns on shore can easily prevent her from remaining near *A*. On the other hand, to deny the main channel higher up, say at *B*, might be an advantage. Liverpool is, of all commercial ports in the Empire, the one which it is most essential to keep open in war, as well as the one most certain of naval protection. The cases of the east and west coasts of England differ, since it is far more easy to watch and guard the Irish Channel effectively than the North Sea. The Atlantic passage, even by slow steamers running well out of their ordinary courses, will offer comparatively little risk. The "Greyhounds" will be safe, till they reach home waters, where naval protection must be afforded. It is inconceivable that an enemy's cruisers would attempt to enter the cramped and difficult waters at the mouth of the Mersey,* when rich harvests await them outside, if they can maintain themselves there. If they cannot so maintain themselves, it would be suicidal to venture into such waters. The defence of Liverpool is thus essentially a naval question. In the Mersey, as in the Forth, and in most of the ports of the Empire, it would be absolutely impossible to permit

* There are only fifteen feet of water on the bar at low tide, and even a second-class cruiser of the *Mersey* type would be unable to enter at all times.



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contact mines to be rendered active in foggy weather. Here, as elsewhere, ground mines, fired by observation, are open to no objection, if they can be satisfactorily worked from a low coast line at some distance from the channel; but the most effective defence of the docks and shipping of Liverpool is that afforded by the natural difficulties of the approaches supplementing the general guardianship of the Irish Channel by the navy.

Besides their employment for closing channels of approach, mines are advocated for denying the free use of outside water, which an enemy might require for the purpose of engaging coast defences. They would—it is claimed—act much as obstacles intended to prevent the free movement of an attacking force on land. Colonel Bucknill thus proposes to employ observation mines in his ideal defence of Cherbourg, and, although not required and unlikely to prove effective, they would at least be harmless so far as French interests are concerned. The strength of the artillery of the defence is, however, generally based on independent considerations, and could not be reduced on account of the presence of the mines. In such a case as Simon's Bay, for example, a moderate artillery defence will amply suffice to deny the anchorage. If the enemy were prepared to put men on shore, which would be the only way of silencing the guns, any mine defence would stand or fall with the failure or success of the landing force. Mines under these circumstances must be wholly superfluous. In any case, it seems evident that only observation mines should be employed. Contact mines would be inadvisable, and where rough weather prevails, impossible. Since it is now clear that the only hope of successfully engaging coast defences lies in anchoring ships in well chosen positions, the restriction of the use of manœuvring waters is of less importance than was formerly supposed.

The general considerations which it is maintained should rule the employment of submarine mines may now be briefly summed—

1. The first requirement of the British Empire in war

is free and open ports which can be used with the minimum of hindrance by day and night. In distant waters the number of British vessels afloat will so enormously exceed the greatest possible number of an enemy's cruisers that the primary object to be attained is quick egress and ingress. As a rule, therefore, the removal of lights, buoys or beacons cannot be permitted. Great naval inferiority alone would justify such a measure.

2. The knowledge that any restrictions existed on the entry of ships would be invaluable to the commander of an enemy's cruiser. To adopt a policy involving such restriction is to play into his hands. This was well illustrated in the Franco-German war. So long as an enemy's vessel can maintain a position outside a mined commercial port, she may confidently expect to effect many captures. Whether she can so maintain herself depends solely on the strength and handling of the British Navy.

3. Naval attack upon ports possessing a moderate but efficient defence will be extremely rare. The modern ship is little fitted for the task, and naval commanders will unquestionably shrink from risking vessels in operations for which they are not constructed. This reluctance has been a marked feature in the past, and will assert itself with even greater force in the future. Defended ports at a distance from an enemy's base are specially unlikely to be attacked, and in home waters, naval supremacy is a necessary condition of all operations except raids. Against a raid, guns will generally be the most effective and economical defence.

4. If, however, a purely naval attack upon a defended port is to be attempted, the most favourable chance is, without doubt, at the very outset of war, as several French writers have pointed out. In this case, the defence cannot in many cases count upon any real aid from submarine mines.*

* "Qu'on ne se préoccupe pas des torpilles fixes! Elles ne sont pas encore mouillées, ou si elles le sont, leurs observateurs ne sont pas prêts, le personnel est insuffisant, mal exercé, troublé!" ("Revue Maritime et Coloniale," vol. xciii., 1887.) The picture is not unlikely to prove true.

5. Attacks on defended ports, to be successful, need—as all experience proves—the co-operation of a force on shore whose action, as recently at Port Arthur, will generally render mine defence nugatory. In the event of a combined attack, mines could at best play a very subordinate *rôle*.

6. No vessels that are likely to be met with in distant waters are fitted to contend with properly mounted and well-handled 6-in. Q. F. guns on shore. The small cruiser classes could not fight field guns behind extemporized earthworks.

7. It is inconceivable that ships will run the gauntlet of modern guns in order to reach cramped waters commanded by fire. In the case of waters thus commanded, therefore, submarine mines have no *raison d'être*. They are not required, and they may be open to grave objection. Again, mines do not enable fire upon inner waters to be dispensed with, and the provision of such fire is in some cases essential.

8. The function of mines is that of an obstacle retaining the enemy under fire by their moral effect, or acting as an absolute block. The analogy of the obstacles employed in land defence is, however, most misleading when pressed too far. The object in a land attack is to close with the defenders as quickly as possible. Provided that the obstacles are not so dense as to prevent such sorties as the defenders are strong enough to make, obstruction of approaches may be regarded as a clear gain. Free breathing power, however, is the first necessity of the ports of the British Empire in war.

9. It follows that, to a weak naval Power whose commerce must be thrown over in time of war, mines are admissible allies. This may have been the case of Germany in 1870, although, as above pointed out, it is probable that loss would have been spared by renouncing submarine defence. To a Power independent of its commerce in war, and able, therefore, to block its ports, submarine mines may also be an economical form of

defence, enabling heavy guns to be dispensed with unless bombardment has to be provided against.

10. Since to Great Britain free waterways are the first requirement in war, it is necessary to prove that mine defence—in the few cases to which it is suitable—can be worked without hindrance to traffic. Otherwise this hindrance, which would be a daily or hourly evil, will be a greater injury to the State than lies in the chance—in any case remote—of the visit of an enemy's vessels. A crucial experiment on the point cannot be made, because the urgency would be greater in war than in peace. If, however, it were possible to lay down a complete defence in the Mersey or Clyde at home, or at Singapore or Malta abroad, and to work it according to the methods proposed for service, a fair idea might be arrived at as to the practical effect of mining British ports. To block a British port is, in most cases, to play the enemy's game, and the success of a mine-field by sinking a vessel in a narrow channel might be far more injurious to British interests than its failure.

11. Observation mines, except in an anchorage, are unobjectionable, apart from their cost; but, since the defence of a port can only be dealt with as a whole, the question of their relative value, as compared with their equivalent in gun power, demands careful consideration. In any case, the scope of action of observation mines is necessarily restricted, since distance from the observing station and thick weather renders them practically useless.

12. Contact mines, except in a channel of approach, are open to little objection by day, so long as a distinction can be drawn with unerring certainty between friend and foe; but must always be attended by risk to friendly vessels by night, and are so dangerous in thick weather that they could not be rendered active. To a Power which decides to block its ports, warn off its own shipping, and permit indiscriminate destruction in thick weather, they are useful.

13. In weather so thick as to prevent the effective use

of guns on shore, most ports are safe from attempted entry by an enemy's ships.

14. By night, where electric lights are provided, the risks of attempting to enter many ports are so great as to be sufficiently deterrent, without any recourse to mines. It is excessively difficult, if not impossible, to con a ship if the electric light can be kept upon her, and to enter on a compass bearing is frequently impracticable. Search lights should be permitted for artillery purposes only. Intolerable confusion would result from employing a double set. There is no such objection to a fixed beam for the use of submarine mines, but it serves to betray their position.

15. Countermining is altogether impracticable, except as one of the operations of a deliberate naval siege, which, however, requires a large and specially equipped force, a long period of time, *and naval supremacy.*

16. The artillery defence, which would ordinarily be provided for waters of approach, supplemented by rifles and machine guns, necessary as a protection against a landing force, will generally suffice for the defence of mine-fields. Guard boats would be the greatest possible impediment to the free action of all fire from the shore, and any wise commander would at once order his range to be cleared. Unless manned by trained sailors, they would be totally unfit to meet on equal terms an enemy's boats upon the water.

17. No mines should be allowed to be laid down except in case of war with a great naval Power, and even then all British ports need not be mined.

18. While cramped waters commanded by fire are never likely to be entered by an enemy's ships, torpedo-boat attacks must in some cases be provided against. Such attacks—generally involving great risks to the boats—would be undertaken only with a view of destroying valuable ships or of blowing in dock caissons. Submarine mines are perfectly powerless to avert this danger; but boat mines capable of being rapidly laid out and picked up will probably be employed in combination with booms

or other obstructions, and a portion of the channel of approach will be illuminated by dispersed electric light beams. Floating obstructions will necessarily be in charge of the Navy.

It has been sought to raise discussion upon the various points connected with the war uses of submarine mines, merely because such discussion is entirely wanting. All the other elements of defence, all questions of tactics by sea or land, have been subjected to searching inquiry in endless books, papers, and lectures. Nothing but good results from free discussion, by which alone can vagueness of thought and hallucination be swept away. The same method—the ordinary method of all science—must be applied to submarine mines, in order that they may be enabled to take their proper place in the national armoury. If an authoritative basis can be arrived at, they will fall at once into their legitimate sphere.

Meanwhile one great principle may be safely laid down. The suitability of submarine mine defence in any given case, its nature and its extent, are matters involving naval consideration alone, and no step affecting any of the waterways of the Empire should ever be taken except on the responsibility of the Admiralty during peace time, or that of the Naval Commanders-in-Chief on foreign stations during war.

G. S. C.

CAN ENGLAND BE INVADED?*

THE evolution of the modern State from the primitive family or the tribe is largely due to a natural craving for personal and territorial security. Association for purposes of defence must, from the earliest times, have been recognized as a necessity, and by a process of successive groupings small units became absorbed into large communities, whose survival depended upon their powers of resistance to aggression. Aptitude for war, race affinities favouring the mutual confidence which organized action demands, and geographical conditions were ruling factors in the upward struggle. So long as territorial security was maintained, civil development could proceed, and commerce might spring up and thrive, while war, if successful, tended to foster the growth of national sentiment, the most powerful of the forces by which a State is consolidated.

The speed of events has been enormously quickened in modern times, but the laws of evolution endure, and the conditions which governed the rise and the decadence of the Old World States remain unchanged. Now, as in the days of ancient Greece, the State which is unprepared to defend its integrity has no sure foundations. Within the past two hundred years every country in Europe has been invaded, and the map has undergone constant changes. Only the frontiers of Spain, Portugal, and Switzerland remain practically unaltered, though they have

* *National Review*, May, 1896.

been crossed and recrossed by armies. Within the last fifty years Russia, Denmark, Austria, France, and Turkey have all been successfully invaded, while the German Empire, the kingdoms of United Italy, Roumania, and Servia, and the Principalities of Montenegro and Bulgaria have sprung into existence. Peace in Europe has been unbroken only since 1885, and in the restless rivalries, the ambitions, the unhealed sores, even the domestic exigencies of nations, lurk abundant potential causes of future wars. None can dream that a state of stable international equilibrium has been attained; few regard it as attainable. Meanwhile great Powers such as France and Germany, and small ones such as Belgium and Denmark, are alike driven to contemplate the possibility of invasion, and to undertake preparations for defence. Such preparations are, next to the maintenance of internal order, the first duty of a State; but the measure of the danger, and the nature and extent of the requisite means of defence, necessarily vary with the national conditions, geographical, political, and economic. To a great Power, self-contained, united, and permeated with a strong spirit of patriotism, hostile invasion, even though successful, can rarely prove absolutely disastrous. The permanent annexation of an alien white race imbued with fighting instincts is not usually an object of desire to a modern conqueror. Great temporary suffering, increased burdens, and prosperity checked for a longer or shorter time, may be the only results of invasion. Prussia, crushed in 1806, was soon again a powerful State, regenerated by disaster. France, brought to her knees in 1814 and again in 1871, is now stronger in every respect than at any period since 1812.

Loss of territory, and especially of external possessions, does not necessarily involve loss of strength, and of all Continental Powers to-day, only Spain,* Holland, and possibly Portugal would suffer materially by being shorn of their few colonies. The possessions of Germany which

* The possession of Cuba is, however, a doubtful advantage to Spain.

Germans refuse to inhabit, and the African adventures of Italy, bring increase of national expenditure without counterbalancing advantage. The colonies of France are not necessary to her existence as a great Power, and would, for the most part, be points of vulnerability if she were overmatched at sea.

The conditions of Great Britain differ vitally from those of all other Powers. Throughout the history of the world no other great island State has ever yet arisen to become the centre of an Empire. Japan alone offers striking points of resemblance, but the analogy is incomplete, since the island Power of the East is only now beginning to expand and to become dependent upon sea-borne commerce. Carthage and Athens in ancient times, Spain and Holland in the present era, owed their greatness wholly to maritime achievement. All fell; and Carthage, which, like Great Britain, lived by external trade, was effaced. Spain, almost insular by reason of a strong natural barrier, lost her Empire by failure to maintain her supremacy at sea; while Holland, never oblivious of her naval needs, and showing no decadence in the fighing power of her seamen, sank irrevocably from the position of a great Power by inability to defend her land frontier.*

Dependence on sea-borne trade for the incomes and food supply of the mass of the population at home; responsibility for the security of more than fifty scattered Colonies, containing upwards of twenty millions of fellow-subjects, whose prosperity is mainly derived from commerce; further responsibility for the maintenance of law and order among two hundred and ninety millions of heterogeneous people in India—such, in brief, are the conditions of the British Empire, with its eleven million square miles of territory. Of its population, more than fifty millions are of our own race, distributed in the proportion of about thirty-nine millions at home to eleven millions abroad. The mutual

* It is none the less true, as Admiral Colomb has stated, that Holland, in two years (1654–56) of unsuccessful naval war with Great Britain, was brought to terms without the landing of a soldier on her shores.

interdependence of Great and Greater Britain is now absolute. Shorn of her Colonial dominions and her commerce, Great Britain would, in the words of the late Lord Carnarvon, be a mere "pauperized, discontented, over-populated island in the North Sea." If a hostile army succeeded in establishing a military occupation of England, the Empire would be disintegrated. France has passed through both these ordeals,* and remains a Great Power. For us there would be no resurrection. The national security may, therefore, seem to require the fulfilment of two independent conditions—naval supremacy, and the maintenance of a home army able to oppose any force that could possibly be landed on the shores of England. These two conditions are, however, intimately correlated, since the necessary standard of the military defence of an island State is determined by the efficacy of the naval weapon. On the one hand, it is obvious that such a measure of naval strength is conceivable as would end all possible risk of invasion. On the other hand, in the absence of all naval defence, an island with such a coast-line as our own can be rendered safe only by maintaining an army able to oppose the whole military force which an enemy could transport by sea. Leaving out of consideration all questions of the Colonies and India, of commerce and of food supply, and assuming Great Britain to be self-supporting, these two propositions represent the extremes of policy in regard to the defence of our island. Between them lies a wide range of debateable ground, strewn with the *débris* of many controversies, and supplying periodical crops of scares, delusions, and luxuriant theories.

To the great Powers of Europe protection against invasion is an affair of armies. Each can be defended from the aggression of its neighbours by military force alone, and no naval strength, however enormous, will save the State whose army fails to repel invasion. Other Powers being neutral, however, France becomes an island in regard to Russia or Austria, and could invade or be

* Three military occupations in this century.

invaded by neither except under conditions dictated on the sea. For the naval factor would then become paramount, and while naval superiority will not guarantee successful invasion, naval inferiority will either render the attempt impossible or lead to swift disaster. In all history, no law stands out more clearly. The sea has never been and never will be a barrier against invasion; but special limitations attach to sea-borne expeditions, and there is no instance of an united people being conquered by military forces landed on their shores,* until all effective naval resistance had ceased.

The dominating influence of the naval factor is strikingly shown by the disastrous failure of the expedition of Xerxes in 480 B.C. The States of Greece were, as usual, disunited; counsels of surrender were plentiful, and Greek galleys were ranged with the Persian fleet. The oracle of Delphi, ever ambiguous, announced that a "wooden wall" would shelter the Athenians, and thus nearly 2400 years ago the comparative advantages of pallisades—fortifications—and ships came to be eagerly discussed. Like Raleigh, St. Vincent or Nelson, Themistocles pleaded the efficacy of naval defence, and Herodotus fifty years later applauded his action. If nothing had been attempted at sea, writes the Father of History,

"what then would have followed may be readily imagined. The fortified lines proposed by the Peloponnesians across the Corinthian isthmus would have been useless; for the Persian, having it in his choice to make his attack by sea, would have subdued the several States one by one . . . so that all Greece must inevitably have fallen under the Persian yoke."

The military defence of Greece broke down in spite of the devoted gallantry of Leonidas and his Spartans, and the advancing host of Xerxes occupied Athens, while his fleet, after fighting a drawn action, closed in upon Salamis. Again there was wavering on board the confederate squadron, and again Themistocles prevailed. The

* Carthage forms no exception, since the Numidians were always a danger at home, and Masinissa played a great part in her downfall.

sea-fight off Artemisium had not redounded to the credit of the superior Persian fleet, which had subsequently suffered loss during a storm. Artemisia, the warrior queen of Caria, with true insight, represented to Xerxes that more than naval issues were at stake, and that defeat at sea implied ruin to his land forces. The day after the battle of Salamis the retreat of the army began, and later the unpursued remains of the Persian fleet retransported Xerxes with sixty thousand men across the Hellespont. Naval inactivity ensued, but the following year the Greek fleet crossed the Ægean, and found the enemy at Mycalé, opposite the island of Samos. The Persian ships, having been drawn on shore and surrounded by fortifications, were destroyed by a successful land attack, on the very day that the troops left behind in Europe were defeated at Platæa.

In 415 B.C. Athens undertook a great venture across the sea—the invasion of Sicily—and became in the following year involved in the siege of Syracuse. Nicias, the Athenian commander, in a remarkable letter quoted by Thucydides, showed that he grasped the fact that the fate of the enterprise must be decided on the sea. The fleet having been defeated in a general action in the great harbour, the expedition was doomed, and forty thousand men were either killed or taken prisoners. Having regard to the resources of Athens, no modern Power has undertaken an over-sea enterprise comparable in magnitude to this, and it is to be remembered that at the very time when reinforcements were being despatched to Sicily a hostile Lacedemonian army was camped within fifteen miles of the Piræus. The power of Athens never fully recovered from this disaster. In 405 B.C. the Athenian fleet under Conon at Ægospotami, caught unprepared for action, and with most of the crews on shore, was almost entirely captured by Lysander. The loss proved irreparable, and in 404 B.C. the Imperial city surrendered to a blockade by sea and land.

This period of less than eighty years is rich in great object lessons. Successful invasion, on a vast scale, was

arrested by a single naval victory, which did not by any means involve complete disaster to the defeated fleet. A squadron which had placed itself behind fortifications was destroyed by a land attack. An immense expedition was ruined by a naval defeat. Finally, the capture of a fleet, due to culpable carelessness, involved the downfall of a maritime Empire. It is not by chance that these lessons repeat themselves all through the pages of history.

The contest between Rome and Carthage involved three great wars, spread over 117 years.* Captain Mahan has shown how completely the course of the immense and varied operations, as well as the final issue, was dominated by sea power.

In the first Punic war, two great naval victories enabled the Romans to send an expeditionary force of twenty thousand men across the Mediterranean to be disastrously defeated outside the walls of Carthage. A third naval victory was neutralized by the subsequent total loss, in a storm, of the victorious fleet, a catastrophe which seems to have been due entirely to the inexperience of the Roman commanders. In three months, a new fleet of two hundred sail was ready for sea, and the consuls for 254 B.C. succeeded in capturing Palermo; but again the fleet was almost entirely wrecked on the return voyage to the Tiber. In 249 B.C. a third fleet was built, and an expeditionary force proceeded to attack Lilybœum, the strongest Carthaginian fortress in Sicily. The Carthaginian "fleet in being" lay near at hand, and succeeded in inflicting a crushing defeat upon the Romans, who saved only thirty out of two hundred and twenty ships, while a convoy with provisions for the troops in Sicily was wrecked at sea. A fourth fleet was built, and the Carthaginians, who had neglected their navy, were totally defeated. Lilybœum could not now be saved, and the Carthaginians, whose trade was nearly ruined, made peace, evacuating Sicily and paying a large indemnity.

In the second Punic war, the deposed mistress of the sea

* 263 B.C. to 146 B.C.

undertook the huge task of invading Italy from Spain. In May, 218 B.C., Hannibal began his great march, and, after the victories of Trebia, Trasimene, and Cannæ, went into winter quarters at Capua at the end of 216 B.C. Military forces employed in Italy had so far utterly failed to stem the invasion; but "the tremendous weapon" of sea power was in the hands of the Romans. Hannibal's hope of raising a great insurrection in the Peninsula was not realized, and a Roman squadron in the Adriatic effectually shut off all aid from Macedonia. Utilizing sea-transport, the Romans were able to operate in Spain, to divert troops intended for Italy, and to delay the march of Hasdrubal. Syracuse, which had espoused the Carthaginian cause after Cannæ, was besieged and taken by Marcellus in 212 B.C., the Carthaginian fleet sent to relieve it declining an action. In 207 B.C. the Carthaginian cause in Spain was lost, and in 204 B.C. Scipio sailed from Lilybœum with a great combined force and landed in Africa. The pressure thus brought to bear upon the centre of the Carthaginian power determined the withdrawal of Hannibal from Italy in 203 B.C., and the battle of Zama ended the war. Even after this second defeat the trade of Carthage revived; but the sea power of Rome was no longer threatened, and the third Punic war seems to have been inspired solely by the desire to crush a commercial rival. In 150 B.C. the Numidians under Masinissa had already defeated the Carthaginians when the Roman Senate intervened at Cato's instigation. Again a Roman army crossed from Sicily to Africa, and in 146 B.C., after a long siege, Carthage fell.

The first Punic war revealed to the Romans the secret of success, and throughout the long struggle they clung persistently to the employment of naval force. Their control of the sea, as Captain Mahan points out, "did not exclude maritime raids, large or small. . . but it did forbid the sustained communications of which Hannibal was in deadly need." The Carthaginians in Southern Italy were reinforced by Hamilcar's fleet in 215 B.C., but it seems

clear that Hannibal's sea-communications were too precarious to be relied upon, and the fact that Hamilcar would not face the Roman squadron blockading Syracuse bears out this view. In spite, therefore, of the enormous difficulty, it was sought to succour Hannibal overland. The entire project of the invasion of Italy from Spain must have been due, as Captain Mahan was the first to discover, to the sense of naval inferiority brought home to Carthage in the first Punic war. Even when the wonderful enterprise was carried through, Rome, utilizing her sea power, could, and did, strike straight at Hannibal's base, and, although the fortunes of the war in Spain were chequered and the details remain obscure, it appears certain that off the coasts of Spain, as off those of Sicily and the Adriatic, the Roman navy was supreme. By neglect of her fleet, by trusting overmuch to her military forces, or from causes which we cannot know, Carthage failed to make any effective use of naval force during the second Punic war, and this to a maritime power, then as now, must involve certain disaster.

In the first Punic war naval supremacy hung for a time in the balance, passing ultimately to the Romans. There were great sea-fights, and at Ecnomus the combatants are stated to have numbered three hundred thousand.* Expeditionary forces were employed on both sides: invasions and evasions occurred.

In the second Punic war, naval supremacy was asserted by the Romans from the first, and the over-sea ventures of Carthage were few and ineffective. In the third, Carthage was limited to the defence of her home territory. One important condition of the contest must be noticed. Carthage was not an island State, and had no natural frontiers. On her flank lay the Numidians, powerful enemies always ready to become Roman allies. Nor was

* We are far too prone to think lightly of the naval achievements of the ancients. The numbers of craft and of men who took part in the old sea-fights were often immensely greater than in modern days, and such a matter as the sea-transport of a hundred and forty elephants would be no child's play to-day.

Rome mistress of an united Italy, or even a nation in the modern sense. Hannibal counted upon the disaffection of the people, and, although the Latin Colonies preserved their allegiance, the Apulians, Samnites, Bruttians, and many Greek cities of the South, hailed him as a deliverer.

In spite of all differences of political conditions, in spite of the apparently vital changes wrought by the introduction of the line-of-battle ship and the modern steamer, it is impossible to study these passages of Greek and Roman history without admitting the existence of eternal laws governing over-sea operations. The struggle of Rome and Carthage for Sicily forcibly recalls, even in details, the contest of France and England for the West Indies. Gibraltar, a fortress impregnable like Syracuse, must have fallen if Rodney's fleet, like that of Hamilcar, had failed in its mission of relief. The Athenian invasion of Sicily is paralleled by Napoleon's descent upon Egypt, and the decisive action in the harbour of Syracuse presaged that in the Bay of Aboukir. The squadron of Tigranes, behind its fortifications at Mycalé, courted and incurred the same fate as that of Admiral Ting at Wei-hai-Wei, and for the same reason. The Roman attack on Lilybœum in 249 B.C. suggests that on Lissa in 1866. A lesson drawn from the Roman policy in the second Punic War might have changed the whole course of the Crimean campaign. In 1877, naval weakness imposed upon Russia a long land march and the passage of a great river and mountain chain, just as similar weakness determined Hannibal's line of operations across the Rhine and the Alps. Turkey, unmindful of the plain teaching of 2200 years of history, has allowed her navy to decay. The one advantage she possessed in 1827 and in 1877 is now lost, and her Zama may, like that of Carthage, be fought near to the heart of her Empire. The Delphic Oracle, in 200 B.C., if its presiding deity had followed the fortunes of Athens and Rome, might, with much certitude, have thus predicted the destinies of England—

In tribal days she will be frequently invaded and colonized by adventurous spirits, drawn from sea-faring peoples across the neighbouring seas. Rome, by reason of her great sea power, will subjugate the islanders. When Rome shall decay they will become independent, and from that day their defence against over-sea invasion must rest with their Navy. If ships and seaman are wanting, raids and invasions will occur. Should the island people become united, unlike the fickle Greeks, so that a stout-hearted race springs up within their water walls, then they will begin to exercise sway over and across far distant seas, kept secure at home by their fleets, so that invasion can no longer be even threatened unless civil dissension should arise. In the known world there is no other territory so fortunately situated. If its people learn to trust the gifts of the sea, they will win and hold an Empire mightier far than that of Athens or of Rome.

So, in resounding Greek verse, might the Priestess have spoken.

In a most interesting article,* Admiral Sir Vesey Hamilton has reviewed the invasions of England attempted or contemplated since the days of the Saxon kings. Between the menaces of Charlemagne and the elaborate projects of Napoleon lie more than 1000 years, during which a number of petty and mutually jealous kingdoms grew into a great State. Meanwhile the galley grew into the line-of-battle ship, and the gun became the weapon by which naval actions were decided. Widely though the political and material conditions of the two periods differed, the same law prevailed. Towards the end of the eighth century, Offa, King of Mercia, began to "turn his thoughts on the proper means of securing his dominions from foreign attempts, which he soon saw could no other way be done than by keeping up a naval force. He therefore applied himself to the raising of a considerable fleet."† Abandoning all idea of invasion, Charlemagne shrewdly sought a Mercian alliance, and Offa, "after a glorious reign of thirty-nine years, bequeathed to England this useful lesson, that he who will be secure on land must be supreme at sea."‡ "I trust and am confident," wrote Nelson, in 1801,

* *The Nineteenth Century*, March, 1896.
† "Lives of the Admirals," Campbell, 1779.
‡ Saxon Chronicles quoted by Campbell.

"that if our sea-faring men do their duty, either the enemy will give over the measure (invasion) or if they persist in it that not one Frenchman will be allowed to set his foot on British soil." Behind Nelson lay long years in which the British Navy had securely guarded England. Offa, the mere chief of a Saxon group, gave evidence of instinctive perception. That the Britain of the first century should fall under the sway of the great sea Power which had conquered Gaul was inevitable, and the first striking indication of the dominant influence which a mobile navy must exert over her destiny occurred two centuries later. In 287, Carausius,* the commander of the Roman fleet at Boulogne, conceived and executed the plan of becoming the master of Britain. Having gained over the fleet, he crossed the Channel, and persuading "a great part of the Roman army, and the Britons in general to embrace his party," proclaimed himself Emperor;

"His fleets rode triumphant in the Channel, commanded the mouths of the Seine and the Rhine, ravaged the coats of the ocean, and diffused beyond the columns of Hercules the terror of his name. . . . Under his command, Britain, destined in a future age to obtain the Empire of the Sea, already assumed its natural and respectable station of a Maritime Power." †

After ruling England for seven years, Carausius was murdered by Allectus. Meanwhile Constantius was making immense efforts to build a navy, and after capturing a portion of the British fleet at Boulogne by a land attack, put to sea, and, evading in a fog the main squadron of Allectus off the Isle of Wight, landed safely on the shores of Kent, where he burned his ships. The invading force, thus cut off, succeeded only because Constantius found everywhere "obedient subjects. Their acclamations were loud and unanimous," and they seem to have "rejoiced in a revolution which, after seven years, restored Britain to the body of the Roman Empire." ‡ Under such happy

* Carausius is generally said to have been a Menapian, but "certain Scottish authors claim him for their countryman, and with great appearance of truth."—*Campbell.*

† Gibbon. ‡ Ibid.

conditions only are over-sea invasions, carried out by evading an undefeated fleet, rendered successful. In the existence of some such conditions, Philip II., Louis XIV., Louis XV., and Napoleon believed. On the other hand, the revolution effected by Carausius curiously resembles that accomplished by William III.

From the days of Offa to our own the fleet has been the gauge of the security of England. Only when it has been neglected or trust has been reposed in other means of defence has territorial aggression occurred. Neglect of the Navy and resort to fortification after the death of Offa brought over successive inroads of Danes till "the country was destroyed, all the cities and great towns demolished, and the people worn out with continual fatigue, having been sometimes compelled to fight nine or ten battles in a year." * The Navy was restored by Alfred, and again the country found rest. Eight hundred years after the reign of Offa the great Navy of Cromwell kept England secure, brought Holland to terms, and carried the flag into the Mediterranean; while, in 1667, Charles II. laid up his ships, and immediately the coasts were harried, and the Dutch sailed up the Thames and Medway. Civil dissension permitted the Norman conquest;† an invitation from John's revolted barons brought a French army to England in 1216; but, as Sir Vesey Hamilton states, "all modern history does not afford a single instance of a successful invasion of this country, because our Navy has always stood directly in the path of the would-be invader." As in the wars of Greece and Rome, however, raids have occurred—never serious except when the Navy had been palpably neglected, as at the close of the reigns of Edward III. and of Charles II. Such raids have varied from the systematic harassing of our coasts by John de Vienne,‡

* Campbell.

† Harold had attained no hold upon England, and William was a rival claimant to his crown. The former staked all upon his army, and lost. If his navy, which had just won a great victory over the King of Norway, had been brought into the Channel, and if there had been an united people at his back, he must have triumphed.

‡ At a time when we were in occupation of a large part of France.

to the petty escapade of Napper Tandy. They have never contemplated the landing of considerable bodies of men, except when Louis XIV. endeavoured to aid James II. in Ireland, or when the Directory sought to raise rebellion in that country with results rendered disastrous by the British Navy. When, as in 1690, the fleet had been allowed to fall below a safe standard, the burning of Teignmouth and the capture of a few trading craft in Brixham harbour were the achievements of De Tourville, notwithstanding that a deposed English king, advised by the greatest of English generals, had drawn up an elaborate plan of French invasion.* When, as in 1757 and 1779, the British Navy was temporarily overtasked, the utmost achievement in home waters was restricted to an unsuccessful attempt on Jersey, and the parade of an allied French and Spanish fleet in sight of Plymouth.

Moreover, the British Navy has shown astounding recuperative power directly national effort was redirected to the sea. Undaunted by the defeat of Beachy Head in June, 1690, the fleet won the great victory of La Hogue in May, 1692, and in 1694, 1695, and 1696 the weight of the British Navy bore heavily on the coasts of France. Beginning with clear signs of naval insufficiency, the Seven Years' War ended in the conquest of Canada and the establishment of British power in India—each a gift of the sea—while in 1759 preparations for a French invasion were met by Rodney's destructive bombardment of Havre and Hawke's great victory in Quiberon Bay. Overtasked † in the war of American Independence—a war begun in a bad cause—the Navy suffered no real reverse. The menace of an inferior fleet in the Channel sufficed to avert a threatened invasion, while Rodney defeated the Spaniards off Cape St. Vincent in 1780, and shattered the fleet of

* To be carried out by "fourteen battalions of English and Irish troops, and nine thousand French."—Lord Wolseley's "Life of Marlborough."

† In 1782 Great Britain was at war with France, Spain, Holland, the revolted colonies of North America, the Marathas, Hyderabad and Hyder Ali of Mysore, and menaced by the "Armed Neutrality of the North"—Russia, Sweden, and Denmark.

De Grasse off Guadaloupe in 1782. In 1793 began the heroic period of the British Navy, which culminated at Trafalgar.

During eight hundred years in which the Navy has stood between Great Britain and over-sea invasion, and has rigidly restricted the raids upon her coast-line, her fleets have as a rule maintained themselves on the coasts of her enemies, while British raids on a large scale have been frequent, and military operations have been carried on in every portion of the world. Until 1374 England held a considerable portion of France, and the last foothold across the Channel was not abandoned until 1558. Even in 1758, a year of relative naval weakness, expeditionary forces effectually raided St. Malo, and destroyed the docks, fortifications, and shipping at Cherbourg. During a period of only 130 years a single British regiment—the 50th Queen's Own—selected at random, has fought in Canada, Germany, Corsica, Egypt, Denmark, Spain, France, Holland, India, Russia, and New Zealand. Such a record shows clearly from what quarter over-sea invasions have proceeded. While the Navy of England has guarded the coast-line, the army has been uniformly employed in offensive operations—its proper *rôle*. Escaping the disabilities under which the Continental States of Athens, Carthage, and Rome laboured, the sea power of the Island Kingdom has had full scope. The British Empire is the splendid result.

Parity of conditions is to be found only in the case of Japan, and the historical resemblance is striking. The early records are vague, but it seems certain that Japan has not been successfully invaded for fully 1600 years, and her military operations have been carried on mainly in Korea, where, from the third century onwards, the Japanese have frequently fought. Even when worsted in the great war of 1592–1598, they still retained Fusan—their Calais—and claimed rights of sovereignty for three hundred years. Their navy, securing their own shores, has persistently ravaged the coasts of China.

"From the reign of Hung-wa to the end of that of Shih-tsung (A.D. 1370–1567) the sea-board provinces of China were devastated by Japanese adventurers, who not only raided the coast, but often established themselves ashore in strong positions, from which they used to sally forth to plunder, destroy, and burn. But they never lost their hold on the sea, and kept their ships either to retreat to Japan when their situation became hopeless, or to remove to some other portion of the coast." *

The Mongols, who penetrated into Central Europe, were utterly unable to conquer Japan, and the huge expedition of Kubla Khan in the thirteenth century suffered disaster as complete as that of Philip II. After many civil wars, which for a time checked the external power of the islanders, a feudal system resembling our own tardily disappeared, and at last an united nation—like Great Britain in 1803†—confronted an ancient foe. Junks had given place to armour-clads and fast cruisers; every technical condition had been revolutionized; but the naval superiority which Japan had asserted at intervals during many centuries remained, and the eight months' war was a series of brilliant triumphs by sea and land.‡ The course and the issues of the operations were ruled by sea power, and the old laws received fresh illustration. Strategically the navy, at least till the battle of the Yalu, was the defensive force; the army, from first to last, was the offensive weapon. The invasion of China from a base in Korea recalls that of France starting from Lisbon, and the elaborately fortified harbours of Port Arthur, and Wei-hai-Wei succumbed to a land attack supported by the navy precisely as Syracuse in 212 B.C. fell to Marcellus.

That naval force is the natural and proper defence of a maritime State against over-sea invasion is the indisputable teaching of history. The unbroken consistency of the records of hundreds of years cannot possibly be the result of accident. No theories incubated in times of peace,

* "The China-Japan War." Vladimir.

† For the first time.

‡ The significance of the Japanese victory is best realized by comparing the operations with those carried on by the Western Powers against China.

no speculations as to what might have happened if events had shaped themselves differently, can shake a law thus irrefragably established. There is only one explanation of the fact, that of the many projected invasions of England none has succeeded for eight hundred years, notwithstanding that naval superiority has not existed at all periods, and that the military forces at home have often been utterly inadequate to resist the strength which could be brought against them, if the sea had not intervened. All the great operations of war are ruled by the measure of the risk involved, and until the defending navy has been crushed, the risk of exposing large numbers of transports to attack is too great to be easily accepted. Moreover, secure communications are vital to successful invasion, and, as Lord Wolseley has pointed out, "a modern army is such a very complicated organism, that any interruption in the line of communications tends to break up and destroy its very life." * This consideration, potent in ancient times, is now paramount. It can be modified only if effective allies are forthcoming in the country to be invaded. Unless this condition is fulfilled, invasion will not be attempted until an absolute control of the sea has been established.

Throughout our history there have been periods at which this great law has been recognized, and has formed the basis—actual if unavowed—of the national policy. At other periods, the law has been disregarded, with results always painfully apparent on the outbreak of war. No doubts or misgivings clouded the minds of the great sailors of Elizabeth when a great invasion was impending which the military resources of the kingdom were hopelessly inadequate to resist. The Navy, to be employed on the enemy's coasts and not in home waters, was then regarded as the true safe-guard.

"The opinion of Sir Francis Drake, Mr. Hawkyns, Mr. Frobiser and others that be men of greatest judgment (and) experience is that (the) surest way to meet with the Spanish fleet is upon their

* *Fortnightly Review*, January, 1886.

own (coast) or in any harbour of their own and there to defeat them." *

"The seas are broad; but if we had been (on) their coast they durst not have left us on their backs." †

"My opinion is altogether that we shall fight them much better cheap upon their own coast than here." ‡

"But making the question general," wrote Raleigh, "whether England without the help of her fleet be able to deter an enemy from landing, I hold that it is unable so to do; and I therefore think it most dangerous to make the adventure. . . . But I say that an army to be transported over-sea, and to be landed again in an enemy's country and the place left to the choice of the invader, cannot be resisted on the coast of France or any other country, except every creek, port, or sandy bay had a powerful army. . . . To entertain them that shall assail us with their own beef in their bellies, and before they eat of our Kentish capons I take it to be the wisest way; to which his Majesty, after God, will employ his good ships on the sea, and not trust in any entrenchment on shore."

If the measures urged by Howard and all his captains had been adopted, the Armada would never have reached the Channel. There was, however, wavering among the Queen's advisers; the idea of holding the fleet close to the coast-line and supporting it by a "second line" of troops and fortifications on shore found favour; a great object lesson was lost, and after many years it came to be believed that England was saved mainly by act of God.§

Again, at the beginning of this century, naval opinion was unanimous, and though great preparations were made on shore in order, as St. Vincent stated, "to satisfy the fears of the old women of both sexes," these fears were happily not permitted to hamper naval action. Whether Napoleon really hoped to carry out his invasion can never be known. There exists, as Sir Vesey Hamilton has pointed out, a mass of evidence tending to prove that his

* Howard to Walsyngham, 14th June, 1558. *Defeat of the Spanish Armada.* Navy Records Society.

† Howard to Walsyngham, 15th June, 1558.

‡ Memorandum by Drake.

§ The fact that the Armada was hopelessly shattered before encountering any stress of weather has required recent demonstration, and is not yet universally recognized. See above, "The Armada," p. 152.

only objects were to collect a great army for ulterior purposes, and by placing it on the shores of the Channel to create panic in England. It may safely be assumed, however, that if the British Navy could have been crushed he would have turned his elaborate preparations to account. In the then relative state of the two navies there was not the smallest hope of this condition being fulfilled, and a single fleet action would certainly not have provided secure communications for the invader. Thus, as often before, menace sufficed to prevent the sailing of a single transport without any necessity for fighting a great naval action, and two months before Trafalgar, Napoleon began his march to the Rhine.

The splendid naval achievements during the first war of the French Revolution, the vigorous naval offensive assumed on the outbreak of the second, the long list of ships captured on the enemy's coast, the great system of fortifications which Napoleon considered necessary for his security at Boulogne —all these circumstances combine to show on which side of the Channel danger lay. Yet within a few years all were forgotten, and amazing fictions found place in popular history. Nelson had been successfully "decoyed away" by Villeneuve to the West Indies, leaving England defenceless save for her army and her fortifications. Only a series of happy chances, unlikely to recur, enabled the fleet to return just in time to win Trafalgar, a lucky accident by which the nation was narrowly saved. Such were, and still to a great extent remain, the beliefs by which policy is swayed. An interesting lecture has recently been delivered on "Fog in War"; perhaps some student of history may be found to treat of "Fog in Peace." If it should come to be generally realized that Nelson merely adhered to the rules of naval war and anticipated orders sent to him by the Admiralty, that the only accident was the narrow escape of Villeneuve from destruction in the West Indies, that a considerable naval force, exclusive of the blockading squadrons, remained in the Channel,* and

* "We could, at that period, have concentrated sixty sail of the line,

that Trafalgar, however momentous, had no more influence on the collapse of the invasion project than Lepanto, then the national policy may emerge from the fog-bank of illusions, theories, and misconceptions by which it has been obscured. Failing absolutely in his naval projects, as under the conditions was inevitable, Napoleon, nevertheless, succeeded in a way which he can scarcely have foreseen. His words, "Il ne faut être maître de la mer que six heures pour que l'Angleterre cesse d'exister"—words merely strung together on the principle which inspired his accustomed proclamations, and without the smallest basis of truth—have entailed upon Great Britain the misapplication of many millions sterling, the darkening of counsel, and national weakness not yet wholly remedied.

There have been two grave inquiries into the question of territorial defence. In 1785, within six years of a time when a superior hostile fleet sailed the Channel, a Royal Commission reported upon a project of fortifications for Plymouth and Portsmouth. The members appear to have been unanimous only in affirming that "exertions for the support of the Navy" were "the first object for the safety and prosperity of the kingdom." With this unexceptionable proposition, their agreement seems to have ended. Certain data were drawn up as to the strength of an invading force, to which Captain Macbride objected as excessive. Rear-Admiral Graves "would not have it implied that I think any new system of additional land fortifications for the security of Plymouth necessary." Lieut.-General Burgoyne, Earl Percy, Vice-Admiral Millbanke, Rear-Admiral Graves, and Captain Sir J. Jervis, signed the following significant protest:—

"Our proceedings have been founded upon the supposition of the whole fleet being absent as mentioned in the second datum, and therefore that the enemy can bring over an army, with an

and as many, or more, frigates, in the Straits of Dover, or their vicinity, at short notice."—*Sir Vesey Hamilton.* Of the result of a fleet action between this force and the eighty French and Spanish battleships, which Napoleon proved quite unable to collect, there can be no possible doubt.

artillery proportionate to an attack on Portsmouth or Plymouth, having (a certain time) to act in, uninterrupted by the British fleet, as mentioned in the third datum. The bare possibility of such an event we do not pretend to deny; but how far it is improbable that the whole British fleet may be sent on any service requiring so long an absence, at a time when the enemy is prepared to invade this country with (force stated) we humbly leave to your Majesty's superior wisdom, and, therefore, whether it is necessary in consequence of such a supposition to erect works of so expensive a nature as those proposed, and which require such large garrisons to defend them."

The estimate for the proposed fortifications, amounting to £760,097, was submitted to the House of Commons on February 27, 1786, in the form of a resolution, declaring the plan to be "an essential object for the safety of the State, intimately connected with the naval defence of the kingdom, and necessary for enabling the fleet to act with full vigour." After a remarkable debate* the resolution, supported by Pitt with all the force at his command, was lost by the casting vote of the Speaker. The opposition was led by Sheridan, who, in a speech which was "the subject of much admiration,"† contended that "the opinion of the land officers was founded upon hypothetical and conditional suggestions." Nine years later the nation was involved in a war with three great naval Powers; but, in the eleven years of storm and stress which followed, it is sufficiently clear that the need of Pitt's fortifications was never manifested.‡

Forty-five years of immunity from naval war materially modified the views of the nation as to its defensive requirements. For experience gained in the tremendous ordeal of the War of American Independence, following close on

* The extraordinary difference between the tone of this debate and that of the military discussions in the House of Commons in the present day was due to the fact that the nation in 1786 knew what war implied.

† Annual Register, 1786.

‡ A little later Fox expressed the then feeling of the nation, when arguing that the armed forces of the Crown required consideration, and "especially the navy, on which the country depends so much more to prevent invasion than on the army."

the Seven Years' War, were now substituted "hypothetical and conditional suggestions," and a unanimous Royal Commission recommended an expenditure of eleven millions sterling* on mere fixed defences. The Commissioners even pointed out that:—

"Should any such catastrophe (defeat or dispersion by storm) occur, or should the fleet, from whatever cause, be unable to keep the command of the Channel, it appears to your Commissioners that the insular position of the kingdom, so far from being an advantage for defensive purposes, might prove a disadvantage, inasmuch as it would enable any superior naval Power or Powers to concentrate a larger body of troops on any part of our coasts, and more rapidly and secretly than could be done against any neighbouring country having only a land frontier; and an army so placed could maintain its base, and be reinforced and supplied with more facility than if dependent on land communications."

No strong protest was forthcoming, for the nation had forgotten what a naval war implied. Either naval history had been relegated to Saturn, or the uninterrupted communications of the Allies in the Crimean Campaign had blinded the national imagination. Between the years 1860–61 and 1889–90, more than seventeen and a half millions sterling were spent upon fortifications and immobile guns,† but the actual total expenditure for the Empire, due to the new departure of 1859, has been far greater. The mere money is of no account; but the change of policy entailed the loss of the ancient faiths. New theories—that naval force is untrustworthy in action, that the British Navy will inevitably be "decoyed away" when needed, or dispersed or wrecked by tempests if available, and that the protection of an island State against invasion is a matter of armies and especially of fortifications —obtained general credence. It naturally followed that the Navy was neglected to a dangerous extent. In 1786, after a great war against a powerful combination of naval

* Lord Palmerston thus obtained about fourteen times the amount refused to Pitt.

† Parliamentary Return.

Powers, the naval estimates exceeded those of the army. In accordance with the modern theory, the Navy estimates in recent years dropped far below those of the army, and equality was only reached in 1895–96. There have been other strange manifestation of the new spirit. So completely has history been forgotten that the tardy rehabilitation of the decayed naval strength of the Empire has involved a superfluous and irrelevant plea for the necessity for an army.* The British army has fought in every land, from China to South America, from the Himalayas to South Africa and New Zealand. It has a long and brilliant record of operations all carried on beyond the naval frontier. It has conquered for us an Empire greater than that of Rome. It has been almost continuously employed on active service throughout this century. The only service it has not been called upon to render is the defence of England against over-sea invasion. But whether the army fought in Canada, Germany, Egypt, Spain, the Crimea, or India, behind it stood the real defensive force of the nation. A sufficient Navy was the necessary condition for its activity in the past, and an inadequate Navy would paralyze its action in any future great war. It is futile to pretend to discern in the recent determination to rehabilitate the fleet the slightest tendency to ignore the need of an army.

The sea is no impassable barrier; but in war it is reasonable probabilities, not possibilities, which must be taken into consideration. To an invading force, whether operating by land or over-sea, secure communications are vital. The protection of these delicate and sensitive threads is, on land, favoured by many circumstances. Geographical conditions may render the communications of an advancing army unassailable, or the broad front presented by that

* A recent writer in the *Times* has unconsciously revealed the hopeless fallacy on which the modern theory of defence is based. By likening the sea to a "mountain chain," from the defiles of which invading armies issue, the climax of misconception seems to have been reached.

army may effectually prevent operations in its rear. At sea there is only one means of obtaining such protection. The navy of the invader must either be able to count on certain victory, if attacked, or must have previously reduced the navy of the defenders to impotence. The first condition was fulfilled in the Franco-German war, the second after Trafalgar. The superiority required in the first case must be overwhelming.* Moreover, the coast-line of an invader is a veritable mountain chain, from which he can issue only at few and known points; and he can so issue only if he has primarily made visible preparations—the collection of transports—at these points. Neglect of the study of naval history has induced difficulties of imagination in relation to operations at sea. To explain the latter it is generally necessary to seek for military parallels, and acting on this principle the problem of over-sea invasion may be thus defined:—

Between two mountain frontiers lies a plain, traversable with perfect ease at all times, and in all directions, by small or large bodies of light cavalry. While crossing it, however, all other arms cease to be fighting bodies. The frontier of the invader can be passed only at few and known defiles. The whole transport of the invading army —which cannot pass over the mountains—must be collected at the outlets of these defiles, incurring risk from the ubiquitous light cavalry during the process. The defenders' frontier, on the other hand, possesses points of ingress relatively large in number, but nevertheless limited. The light cavalry, which cannot cross either frontier, is perfectly self-supplied, carrying with it all that is needed, moving at very high speed, capable of being restrained only when caught and defeated by a force of similar nature, flexible to the last degree, and organized in units

* Naval raids are, as has been noticed, always difficult to control; and such raids, even in small force, are necessarily dangerous to great fleets of crowded transports. We shall shortly possess a flotilla of ninety "destroyers," the greater part of which will always be available in the Channel. How a fleet of transports is to be protected against such a force cannot be stated.

able, without preparation, to act singly or in any combination, and to disperse or reassemble at will.

Such being the elements of the problem of over-sea invasion, the invading general will surely decline to move his transports into the plain till it has been definitely cleared of hostile cavalry; while his opponent, recognizing that the frontier is distinctly unfavourable for defence, will decide to wage offensive operations in the plain where the invading army is powerless, and will make his preparations with this object. Remembering, however, that an enterprising enemy may attempt to raid his frontier, he will provide light defences for the bases from which his cavalry acts, and he will hold a well-organized mobile force in readiness to oppose forays at other points.

Such would be the logical policy in regard to the defence of a Great Britain self-supporting and standing apart from her Empire. But the only conditions which could render invasion practicable, would at the same time imply that the vital communications of the Empire were in the hands of an enemy, that India and every colony lay open to attack in any force, that trade was paralyzed, and that the means of existence of the home population were destroyed. In a multiple sense, therefore, naval defence is now vital.

The answer to the question, Can England be Invaded? is deeply graven on the pages of history. Nearly five hundred years ago, the only means of security were pointed out in a poem, in ten cantos, bearing the title, "De Politia Conservativa Maris," * and ending with the following remarkable lines—

> "Keep then the Sea about in special,
> Which of England is the Town-wall.
> As though England were likened to a city,
> And the Wall environ were the Sea.
> Keep then the Sea that is the Wall of England,
> And then is England kept by God's hand:
> That for anything that is without,
> England were at ease withouten doubt."

* Written about 1422. Entick, 1757.

It is impossible to improve upon the simple words of this old writer, who clearly saw where lay the safety of England. He lays down the principles of a national policy which have at times been obscured, only to be reaffirmed by the experience of war.

The national instincts and the aptitudes inherited from the pick of the seafaring adventurers of Western Europe are not extinct. Geographical advantages remain, and have been enhanced by naval progress. Our internal resources have greatly increased in proportion to those of our rivals. With a far inferior population, generally disunited, Great Britain won her supremacy on the sea and frustrated every projected invasion. The population of these islands now equals that of France, and a national cohesion, unknown in the period of great wars, has been happily attained. In 1800 there was not a single self-governing colony; there are now eleven centres of British power scattered over the world. In the Empire of to-day there are potentialities undreamed of in the past. Far stronger at home than when it faced the fiery ordeal of the War of American Independence, the nation has now external resources which are as yet unrealized. Which of all the great Powers owns free colonies able and willing to provide active aid in any national emergency? On the other hand, while at the beginning of the century there was only one land frontier to guard, there is now a second, happily the strongest in the world. Both are, however, indefensible under the conditions which alone render possible the invasion of England. Thus the protection of the sea communications of the Empire has become a paramount object, involving defence against territorial aggression, and securing to the army the possibility of offensive operations. Raids, possible now as always, must in the case of all positions necessary to the action of the Navy, be met by moderate defences supported by mobile garrisons.

If the nation is true to its own splendid history, if the precepts of the Lancastrian poet above quoted, of Howard,

Drake, Raleigh, St. Vincent, and Nelson, are permitted to inspire the national policy, and if illusions bred in times of peace are flung aside, the essential naval conditions can be fulfilled. Then, as in the past, will England be secured against invasion.

G. S. C.

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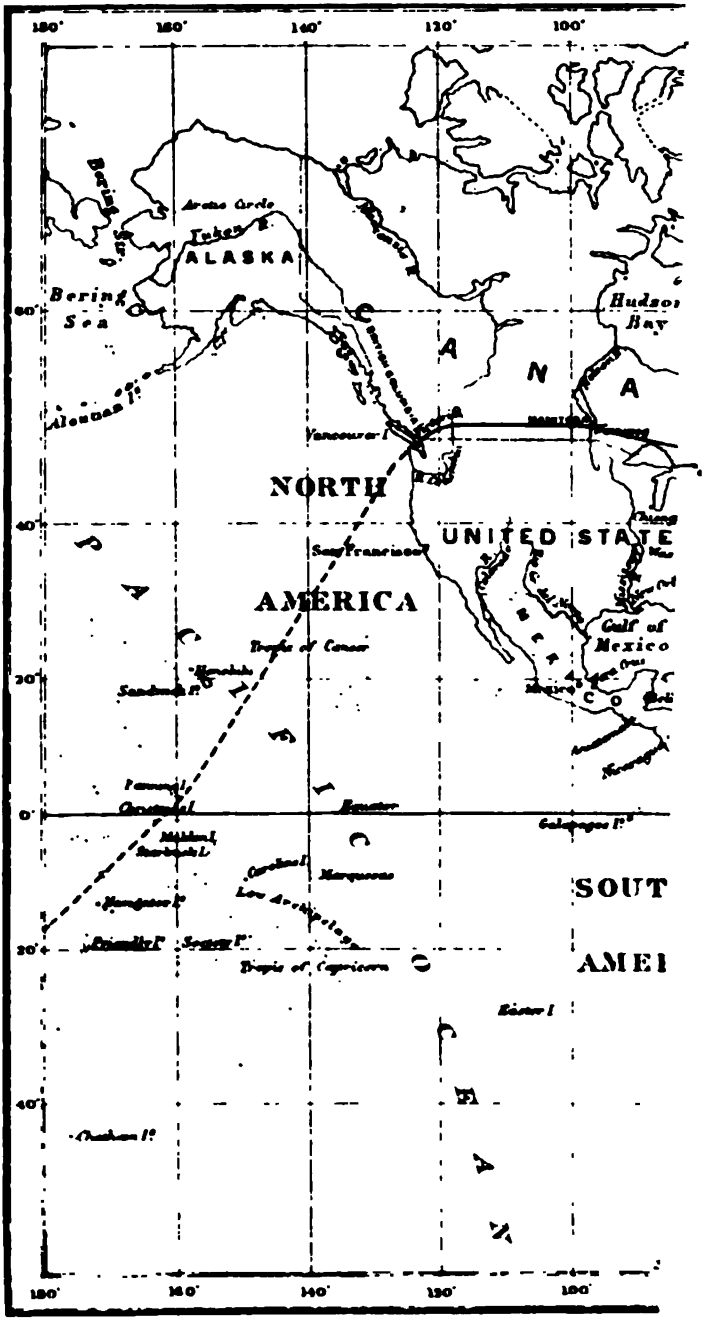
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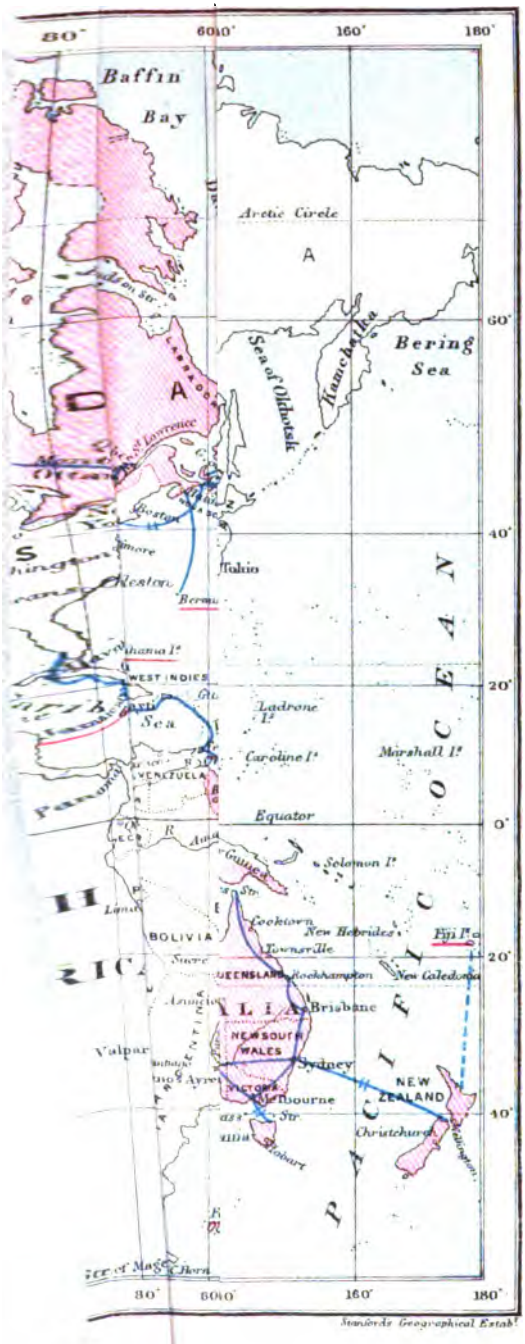
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